Current Situation, Challenges & Future Outlooks of Hospital Sector in EMRO

Pakistan's Hospital Sector Profile - 2020

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Technical Report

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Office # 02 (1st Floor) Usman Plaza, Newmal, Chak Shahzad, Islamabad Pakistan 44000
Phone: ++92-51-5402247 Email: ceo.poha@pakonehealth.org Web: www.pakonehealth.org

PAKISTAN'S HOSPITAL SECTOR PROFILE – 2020

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ABBREVIATIONS/ ACRONYMS

ACLS	Advanced Cardiac Life Support
BERC	Biomedical equipment and repair center
CMH	Combined Military Hospital
COVID-19	Corona Virus Disease 2019
CRVS	Civil Registration and vital statistics
DHIS	District Health Information System
DHQ	District Headquarter
DOH	Department of Health
DRG	Diagnosis Related Groups
DRM	Disaster Risk Management
ED	Emergency Department
EMR	Electronic Medical Record
EMS	Emergency Medical Service
ERC	Emergency Response Committee
FPSC	Federal Public Service Commission
HCE	Healthcare Establishment
HIS	Hospital Information System
HISDU	Health Information System Delivery Unit
HMIS	Health Management Information System
HTA	Health Technology Assessment
ICD	International Classification of Diseases
IDAP	Infrastructure Development Authority Punjab
IDAP	Infrastructure Development Authority of the Punjab
KPI	Key Performance Indicators
KPK	Khyber Pakhtunkhwa
LMU	Logistics Management Unit
MOH	Ministry of Health
MSDS	Minimum Service Delivery Standards
NDMA	National Disaster Management Authority
OPD	Outpatient Department
PDMA	Provincial Disaster Management Authority
PERS	Performance Evaluations Reports
PHC	Punjab Healthcare Commission
PHCC	Punjab Health Care Commission
PIMS	Pakistan Institute of Management Sciences
PMDC	Pakistan Medical and Dental Council
PNC	Pakistan Nursing Council
PPRA	Public Procurement Regulatory Authority
PPRA	Public Procurement Regularity Authority
PSPU	Policy and Strategic Planning Unit
RHC	Rural Health Centre
SCM	Supply Chain Management System
TC	Trauma Center
THQ	Tehsil Headquarter

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INTRODUCTION

Introduction to the Hospital Sector in Pakistan

Across differing regions, medical institutions or hospitals play a major role in the social and economic vitality of cities. The sector of Hospital plays a critical role in moving towards Universal Health Coverage (UHC). Hospitals are complex institutions that are key components of health care systems receiving between 50 and 80 percent of many countries' health expenditures. The concept of healthcare, including social determinants of health, is critical to public health and economic development alike. Hospital Care, Planning, and Management is a priority area of work for WHO EMRO. A proliferate amount of literature, collected over decades, is available on the models of hospitals within health systems. Whilst many assessments have been carried out on the health systems in the Eastern Mediterranean Region (EMR), there is neither resource up to date that has comprehensively analyzed the hospital sector nor the different components/functions related to the hospital care, planning, and management in the region. Pakistan has a complex health care system because it includes healthcare subsystems by federal governments and provincial governments competing with formal and informal private sector healthcare systems.

Punjab is the largest province in Pakistan, with approximately 110,012,442 people (2017 Census), and is divided into nine divisions and 36 districts. According to the report of Pakistan's Bureau of Statistics 2019, there are 389 hospitals, 1268 dispensaries, 284 maternity and child welfare centers, and 60387 beds are available in these medical institutions in Punjab. Sindh is the second largest province of the country, with approximately 47,886,051 people (2017 census), and is divided into five divisions and their respective districts. According to the report of Pakistan's Bureau of Statistics 2019, there are 473 hospitals, 2819 dispensaries, 220 maternity, and child welfare centers, and 38623 beds are available in these medical institutions in Sindh. Furthermore, Khyber Pakhtunkhwa (KPK) has approximately 30,523,371 people, and divided into seven divisions and 34 districts. There are 277 hospitals, 983 dispensaries, 153 maternity and child welfare centers and 24329 beds are available in these medical institutions, in this province, according to the 2017 census. Moreover, Baluchistan has seven divisions and 33 districts. Its population is approx. 12,344,408. The number of hospitals in this province is 134, with 574 dispensaries, 95 maternity and child welfare centers, and 7797 beds.

Unfortunately, there is no exclusive focal point either at Federal Ministry of Health or provincial health departments, responsible for planning, development and improvement of Hospital Sector. At federal level ie ICT District also, there is little information of the hospital sector, included in the report. From Federally administrator area, like the Azad Jammu and Kashmir region, has three divisions and ten districts with an estimated 4,045,366 population. The Healthcare system in that region is better shaped and developed compared to some other provinces, but still hospital sector coordination is lacking there as well.

Table 1 General Information of Healthcare Situation in Pakistan

General Information	
Population Estimate 2019	**220M(2019)**
Population Density (per km2)	**287/km2**
Life expectancy at birth (years)	**67(WB 2018)**
Country income group	**LMIC**
Country emergency grade	**½**
Gross national income per capita (PPP international $ / year)	**$1530 (2019)**
Total expenditure on health per capita (international $ / year)	**$45 (WB, 2017)**
Total expenditure on health as a percentage of GDP (year)	**2.9%**
Out-of-pocket expenditure as a percentage of current health expenditure (year)	

Table No. 1 highlights the general information of the healthcare sector in the country. The purpose of this report is to find out the current situation, expected challenges, and future outlooks of the hospital and Healthcare system of Pakistan. The EMR office of the World Health Organization (WHO) has taken the initiative to compile information regarding the hospital sector and different components/functions of hospital planning and management of all the 22 countries, including Pakistan, in the East Mediterranean region book." The book will be the first endeavor for the EMR and has not been done in any other region that provides invaluable information that can be used by policymakers, managers, experts, academics, and researchers. The Eastern Mediterranean Region is politically volatile. During the last ten years, at least ten countries have been or continue to be in a state of occupation, internal conflict, or complex emergency, including healthcare challenges.

SECTION 1-- HOSPITAL AND HEALTH SYSTEM OVERVIEW

A. HOSPITALS WITHIN THE HEALTH SYSTEM NETWORK AND COMMUNITY

A-1. Classification of Hospitals in the Country and Levels

In Pakistan, hospitals are distributed in private and public categories. Their levels are made according to the facilities they have been provided. Pakistan has a mixed health system that includes public, parastatal, private, civil society, philanthropic contributors, and donor agencies. Health care delivery to the consumers is systematized through four modes of preventive, promotive, curative, and rehabilitative services. The private sector attends 70% of the population through a diverse group of trained health team members to traditional faith healers. Furthermore, under article 18th amendment the health care services are the obligations of provisional government except for the federal area. The public health delivery system functions through a three layer approach primary, secondary, and tertiary. Delivery of Healthcare services in ICT falls under the responsibility of the Federal Ministry of Health and the model delivery system being proposed should show significant progress within two years. This model will essentially "ring-fence" the ICT and include the comprehensive range of communities' services and the population within ICT.

Table 2. Health Facilities by Province

Public Sector Hospitals/Facilities By Province 2019								
Province	Tertiary/ Secondary Hospitals				PHC Facilities			Total
	Tertiary	DHQ	Civil Hospitals	THQ	RHC	BHU	Other	
Punjab	43	26	9	120	313	1189	2091	3791
KPK	5	19	16	30	103	773	619	1565
Sindh	18	17	25	58	125	760	1097	2100
Balochistan	5	22	20	2	98	676	668	1491
AJK	5	10	0	9	47	229	309	609
FATA	0	7	11	5	9	171	909	1112
GB	0	6	5	3	3	23	526	566
ICT	2		8	0	3	12	100	125
Total	78	107	94	227	701	3833	6319	11359

At the provincial level, say in Punjab, the implementation of Minimum Service Delivery Standards (MSDS) are yet to be fully implemented at multiple levels including PHCC (Primary Health Care Centres , Basic Health Units). However, in general the BHU (Basic Health Unit) is located at Union Council level and serves a catchment population of up to 25,000. The Rural Health Centers (RHCs) have 10-20 inpatient beds, and each serves a catchment population of up

to 100,000 people. Tehsil Headquarter Hospital (THQ) hospital is located at each Tehsil and serves a population of 0.5 to 1.0 million. Given the new needs, the majority of THQ hospitals have 40 to 60 beds. The District Headquarter Hospitals (DHQ) is located at the District level and serves a population of 1 to 3 million, depending upon the hospital's category. The DHQ hospitals provides promotive, preventive, curative, advanced diagnostics, inpatient services, advanced specialist and referral services. Though efforts are being made by government to improve services, specially by Punjab Health Care Commission but gaps still remain . Services package and standards of care at the Specialized Healthcare (SHC) level (i.e. Tertiary Hospitals) are also not standardized or well defined as those should have been.

Table 3. Types of Services being provided by Various Types of Hospitals

S #	Level	Hospital Category	Essential Service Package
1	**Provincial**	**Tertiary/ Teaching**	Specialized Healthcare services are provided in all disciplines such as Cardiology, Pulmonology, Gastroenterology, Neurosurgery, Orthopedics, Thoracic Surgery, etc. This healthcare is in addition to the essential disciplines of Medicine, Surgery, Gynecology, and Pediatrics & Diagnostics.
2	**Divisional**	**Secondary**	Healthcare is extended in essential disciplines of Medicine, Surgery, Gynecology, and Pediatrics &Diagnostics. However, the sophistication level of these services is less than that of a Tertiary / Teaching hospital.
3	**District**	**Secondary**	Healthcare is extended in essential disciplines of Medicine, Surgery, Gynecology, and Pediatrics & Diagnostics. However, the sophistication level of these services is less than that of a Divisional hospital.
4	**Tehsil**	**Secondary**	Healthcare is extended in essential disciplines of Medicine, Surgery, Gynecology, and Pediatrics & Diagnostics. However, the sophistication level of these services is less than that of a District hospital.

Healthcare sector is critical and essential for any country, and has an direct impact and share in its economy of country. With healthy population will have positive impact in increasing productivity and outputs to boost development and economy. At the time of its emergence Pakistan inherited grossly inadequate Healthcare Delivery System- insufficient to meet its expanding healthcare needs. Healthcare system in Pakistan is practically vertical and partially , horizontal. Table No. 2, provide an overview of types of services being extended by various types of hospitals to the community.

Table 4. No. of Hospitals and Hospital Beds

Hospitals	Number	Hospital Beds	Number
Total No. of Hospitals (Public & Private)	102782	**Total No. of Hospital Beds**	51161
Public Hospitals			
Number of public hospitals	5717	Number of beds in public hospitals	133716
Number of first-level hospitals	10853	Number of beds in first-level /hospitals	133716
Number of Secondary/Provincial hospitals	506	Number of beds in secondary/provincial hospitals	12299
Number of Tertiary/ Teaching Hospitals	78	Number of beds in tertiary teaching hospitals	19616
Number of tertiary non-teaching hospitals (if any)	x	Number of beds in tertiary non-teaching hospitals (if any)	X
Number of Ministry of Health Hospitals	119	Number of beds in MoH hospitals	2571
Private Hospitals			
Private For-Profit Hospitals	96738	Private for-profit hospitals	N/A
Private not for profit hospitals		Private not for profit hospitals	N/A
Number of public hospitals with less than 50 beds	NA		

Table 5. Hospital Outputs (latest available year)

Hospital Outputs	NUMBER
Number of in-patient admissions* (year)	1,415,034 (DHIS)
% of patients hospitalized from the emergency department (year) (if available)	NA
Number of out-patient visits (year) DOH, Hospital /Facilities	(268M) (DHIS)
Number of Emergency Department visits (year)	~26M (2019, DHIS)
The annual number of lab exams (year)	~54.3M (2019, DHIS)
The annual number of X-ray exams (year)	5M
The annual number of CT scan exams (year)	345,435 (2017-18)
The annual number of MRI exams (year)	NA
Average bed occupancy rate (BOR)** (year)	THQ - 72% (2017) DHQ – 95% (2017)
Hospital Bed turnover rate (year)***	NA
Average Length of Stay (ALOS) **** (year)	2 (2017)

*In-patient admissions are defined as those patients remaining in the Hospital for more than 24 hours
**BOR = inpatient days of care/beds x 365
***Hospital bed turnover rate = Number of discharges (including deaths) in a given time period / Number of beds in the Hospital during that time period
****ALOS= Total number of Patient days / the number of admissions during a full year. Day cases are excluded.

A-2. Principal Legislations, Legal Framework and Policies

Pakistan has undergone massive changes in its federal structure under the 18th Constitutional Amendment. Some improvements were noted in health-systems performance during the past 65 years but key health indicators lag behind adjoining countries. In country, there are many legislations, frameworks, and policies of the healthcare system on the national level, but their proper implementation is lacking. The complaints of negligence and medical malpractice is not uncommon. Law of Torts is invoked for civil remedy for medical malpractice cases in Pakistan. Medical practitioners can be tried under charges of criminal liability too but courts are very reluctant to treat doctors under Pakistan Penal Code and want to contest such cases under civil liability. Medical Training Institutions (MTI) Reforms Act 2015 Amended from time to time. This act provides autonomy to the Government-owned Medical Teaching Institutions and their affiliated teaching hospitals in the Province of the Khyber Pakhtunkhwa. MTI Reform is aimed improve performance, enhance effectiveness, efficiency, and responsiveness for the provision of quality healthcare services, especially in teaching hospitals, to the people of the Khyber Pakhtunkhwa. The legislation is limited to tertiary health care facilities in the province of KP, and as every tertiary care hospital is autonomous, every Hospital has devised regulations under the act.

The clinical governance framework, MSDS or Minimum Service Delivery Standards, provides comprehensive and detailed performance indicators and standards of service delivery for hospitals.

A-2.1 Hospital Development

At present there exist no national or provincial strategic policy framework for the development of hospitals or the distribution of beds in many hospitals. However, across Punjab, there is a wide network of tiered healthcare facilities based on population density to determine the catchment areas, starting from basic health units and rural health centers up to specialized tertiary care hospitals and medical institutes. In KPK, there is no explicit National Strategic Policy framework for hospital development. However, the province has devised its own strategy of categorizing public sector hospitals as A, B, C, and D. For instance, MTI- Hayatabad Medical Complex Peshawar falls under the category of a level hospital that can cater to patients from all over the province. The department of health has notified the minimally acceptable standard of 1 bed per 2500 persons of population. In Punjab, the number of beds increased during the last 5 or 10 years. For example there ha been considerable increase in number of beds in Benazir Bhutto Hospital and the Holy Family Hospital Rawalpindi.. Moreover there are the following developments in Punjab;

- *The number of beds increased during the last 5 or 10 years*
- *Clinical subspecialties have been established.*
- *Increase in number of pediatric surgeries.*
- *Increase in number of plastic surgeries.*
- *Creation of departments of infectious disease.*

A-2.2 Hospitals and other care facilities/providers

There is a fundamental issue with coordination and data sharing among healthcare facilities and providers and other health system entities, resulting in poor continuity of care. Distribution of facilities across the province remains a problem as most specialized facilities remain concentrated in larger metropolitans with poor access to high quality, specialized care for rural dwellers. However, in tertiary hospitals the relationship exists with the following departments/ systems.

- *Social Welfare Activities*
- *Primary& Secondary Health Care Department*
- *With other referral Hospitals*
- *AIDS Control Program*
- *Population welfare department*

While in KPK, there are vertical programs (now executed by the Health department as an integrated health project) through which preventive and health promotion activities are offered to the local community and training programs for nurses, paramedics and primary health care physicians are offered in perpetuity.

A-2.3 Referral System (From Lower to Higher Facility)

Though there is no formal system of referral for patients, the current referral practices are based on a blend of telephonic, documented and electronic communication. On the other hand, among Medical Teaching Institutions (MTI) referral is evolving as joint efforts are being made to devise a robust inter MTI referral mechanism, specially in KPK province but that is yet to be mature . Presently there are no general practitioners/ family physicians working under an organized system to run a gatekeeping system. The Tertiary Care Teaching Hospitals) interact from time to time to discuss policies/strategies/ practices to improve patient care.

A referral system also exist in collaboration with 1122/emergency services-specially in Punjab . Public hospitals and other healthcare entities have a tiered structure to the lowest tiers like basic health units and rural health centers. Individuals presenting to low tier HCEs, however, can be referred to the second or third tier depending on the need of the patient and the facilities available within the current tier of a healthcare facility. So, a patient requiring a relatively advanced procedure/consultancy presenting in an RHC/BHU can be referred to the THQ, the DHQ, or even the tertiary care hospitals available in the in the catchment area.

A-2.4 Geographical (Catchment) Area or Population. Following is the geographical (catchment) area/population criteria which each type of health facility serve.

- *Basic Health Unit-25000*
- *Rural Health Centre- up to 100,000*
- *Tehsil Headquarter Hospital ~ 500,000 – 1,000,000*
- *District Headquarter Hospital ~ 1,000,000 – 3,000,000*

- *Tertiary Care Hospital ~ Establishment of tertiary care hospitals (specialty and teaching) is not determined by catchment area or population matrices.*
- *Private Hospitals ~ Private hospitals and HCEs are not established based on geographical or population-based criteria.*

Framework for establishing private hospitals based on population needs remains highly un-regulated, resulting in disparate distribution, with high-end facilities serving affluent areas and cities, with market principles (demand & supply and affordability) being the driving force.

A-2.5 Promotion of cost-effective approaches to hospital admissions

The use of these measures (e.g. day care, day surgery and home health care) remains discretionary and varies from institution to institution, and at times, within the institutions. Home healthcare remains primarily out of pocket expense and therefore, has not gained much traction. Patients requiring home healthcare/long-term care need to healthcare professionals on their own. Patients requiring home healthcare/long-term care need to healthcare professionals on their own. In the recent past, telehealth has gained acceptance. With the Covid-19 pandemic, demand and use of both home healthcare in delivering tests and drugs to customer's houses and helpline and telehealth measures is becoming common. In Punjab, there are cost effective OPD services, available in almost all the district and tertiary care hospitals.

A-2.6 Essential Service Package for Hospitals at different levels

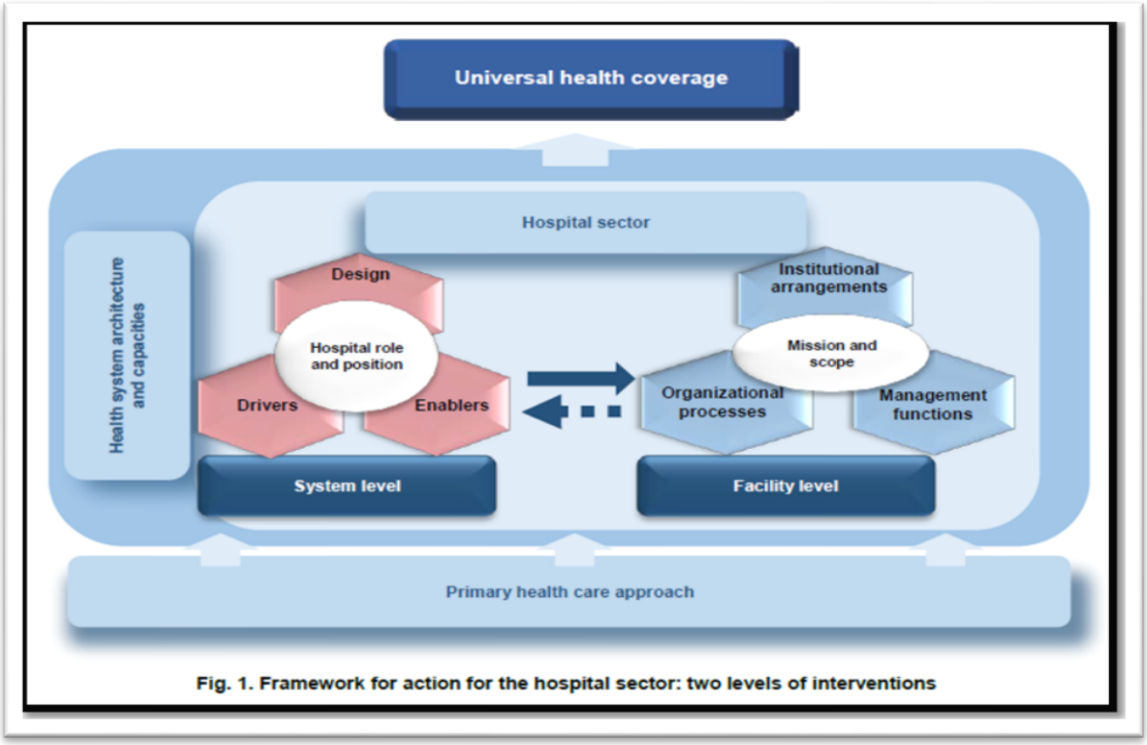
An Essential Package of Health Services (EPHS) can be defined as the package of services that the government is providing or is aspiring to provide to its citizens in an equitable manner. Both Federal and provincial governments are trying to scale up health benefit plans, such as social health insurance, to increase population health coverage. This brief of findings from comparison between the services covered under the country's prominent health benefit plan(s) to the countrys Essential Package of Health Services. This concept has been implemented as minimum service delivery standards in all provinces specially in Punjab. However, there is a need to determine the requirements for implementation of the essential health services package, including the cost review. This may also advocate for the enhancement of allocation for health sector in Pakistan.

A. Primary Healthcare Level

This include services like;

1. *Education concerning prevailing health problems and the methods of preventing/controlling them*
2. *Promotion of food supply and proper nutrition.*
3. *Treatment of common health problems.*
4. *An adequate supply of safe water and basic sanitation*
5. *Maternal and child health care, including family planning*
6. *Immunization against major infectious diseases*

Figure 1. Framework for the action of the hospital sector at primary healthcare approach with levels of intervention.



B. Secondary Health Care Level

Services package and standards of care at the SHC level are also not well defined. THQ hospital provides referral care to the patients, including those referred by the Rural Health Centers, Basic Health Units, Lady Health Workers, and other primary care facilities.

C. Tertiary HealthCare Level

These hospitals are supposed to provide all types of specialized services to the patients directly visiting them or referred from other tiers of healthcare.

At provincial level, there are tertiary healthcare institutes. There are government-approved Minimum health Service Delivery Packages (MHSDP) for primary and secondary care in Khyber Pakhtunkhwa province. There hospitals have been identified for respective services for which resources including human and physical are aligned accordingly. . MTI- Hayatabad Medical Complex Peshawar Hospital has developed its business plan 2019-21, which identifies services it is to offer to general public. In KPK there is a comprehensive planning and operational plan with financial costing so that the allocation of resources can be ensured.

Table No.6 Essential Health Service Package at Various levels

S #	Level	Hospital Category	Essential Service Package
1	**Provincial**	**Tertiary/ Teaching**	Specialized Healthcare services are provided in all disciplines such as Cardiology, Pulmonology, Gastroenterology, Neurosurgery, Orthopedics, Thoracic Surgery, etc. This healthcare is in addition to the essential disciplines of Medicine, Surgery, Gynecology, and Pediatrics & Diagnostics.
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A-2.7 Hospitals and the Community

Within premises of the hospital, primary health care services such as family planning counseling, provision of contraceptive commodities, invasive FP procedures and Immunization of the newborn & expecting mothers are being offered. Health promotion and education activities take place in almost every out-patient department regularly. Community engagement and interaction with hospitals are mostly through public outreach such as camps (educational and screening).In Punjab, community activities, health promotion, population health initiatives and public health activities are present. In KPK, the hospital, primary health care services such as family planning counseling, provision of contraceptive commodities, invasive FP procedures and immunization of the newborn & expecting mothers are being offered. Health promotion and education activities take place in almost every out-patient department regularly. Education of pregnant ladies is a routine service provided by the Department of Gynecology & Obstetrics of Hayatabad Medical Complex Peshawar as part of antenatal care.

A-2.8 Hospital Classification

The current mechanism for the distribution of hospitals is based on geographical and population-based, providing a tiered healthcare facilities structure (Primary, secondary and Tertiary/teaching hospitals). Service standards are determined by the MSDS which are enforced by the PHC Act of 2010. On the provincial level the secondary hospitals are classified as A, B, C and D. Some category a hospitals have been declared as teaching hospitals. The government has notified eight tertiary care hospitals of Khyber Pakhtunkhwa as MTIs. The teaching hospitals such as Gajju Khan teaching hospital or Saidu medical college are under the control of Health Department KP.

A-2.9 Hospital Distribution

A decent infrastructure of hospitals is present in all regions of the country However, due to flawed regulatory oversight and audit mechanism, all Primary and secondary care hospitals do not provide mandated optimal services of the same quality and standards to their catchment population. In Punjab, some hospitals have displayed its mission statements in hospitals . In KPK, bed distribution is mostly under the guidelines of the Pakistan Medical & Dental Council. For example in MTI- Hayatabad Medical Complex Peshawar. Institutions usually offer equal opportunities/services to all, irrespective of religious beliefs, cast, or geographical considerations/quotas. Hospital mostly follow provincial and national guidelines for treating marginalized segments of the society, including privileged citizens and trans-genders. Accreditation by the College of Physicians and Surgeons of Pakistan for higher education (eg higher medical diplomas/degrees) also plays a significant role in allocating resources for patient care, as additional specialties are accordingly available to serve area population.. Any patient arriving in the Hospital is served indiscriminately.

A-2.10 Role of Public and Private Hospitals in Promoting PPP

Currently, some health finance models are under consideration by government to bring about Public-Private Partnership (PPP) to ensure quality healthcare services to the more vulnerable by improving the operational management of these hospitals. In this case, one example of PPP is Sehat Sahulat Cards. The premiums for the eligible are paid for by the government to State Life Insurance which acts as the intermediary between the providers and the patients. The public exchequer fully funds it. In Punjab, there is no Public-Private Partnership arrangement in most hospitals. The same situation is in KPK. While there are a few mission-driven private hospitals (Shaukat Khanum Memorial Hospital, Sughra Shafi Hospital, Ghurki Trust Hospital, Chaudhry Rehmat Ali Trust Teaching Hospital, LRBT Eye Hospital, Mughal Eye Hospital, and some other trust hospitals run by philanthropists and political organizations), they retain a component of their services for paying patients. Indus Hospital Karachi has been given the management and financial control of some of the poor-performing public sector hospitals.

A-2.11 Major Issues on Service Accessibility

Major issues remain physical access and cost of services. Punjab currently has only one Joint Commission Accredited hospital that operates in the private sector on mission-based operational management, raising private funds to provide care to poor patients for free. In KPK, major issues include the absence of gatekeeping and formal referral mechanism; this hampers the overall accessibility, efficiency and equity due to uncontrolled utilization of services. There are safety mechanisms funded by the provincial and federal government such as Health insurance, zakat and Bait ul Mal, and helping patients pay fees for services offered in some institutions in KPK, e.g., MTI Hayatabad Medical Complex Peshawar.

A-3 Main Gaps and Challenges in This Area

Some of the most significant gaps are the following;

a. *Public at large is unaware of the facilities provided by Government specially pertaining to concessions like Zakat or Baitul mal*
b. *Illiteracy is one of the major barrier to provision of services to large masses.*
c. *There exiast insufficient availability of community health services. Preventive services, at grassroot level)*
d. *There exist large dependence of people on tertiary institutions with weak linkage or ferral system.*
e. *Concentration of tertiary and specialty care hospitals in large urban centers.*
f. *Weak referral system*
g. *No well-defined priority benefit package*
h. *Unregulated private hospital sector*

B. PLANNING

B-1. National Strategic Plan as Part of the National Health Strategic Plan

After the promulgation of the 18th amendment, health has been devolved as a provincial subject. Now the role of the Federal Government is limited to the provision of National Vision 2025 to lay down main guidelines for Provincial DOH. The planning process at the provincial level is in line with the National policies. However, the institutional planning process has a certain amount of autonomy. They can plan for the institution independently and can execute it themselves without seeking the approval of the federal or provincial authorities. .

Both at Federal and Provincial levels, the planning is done by using the instruments called Planning Commission Performa, namely PC-I & PC-II. Initially, the need assessment is done by employing the PC-II form. After its approval, the project proposal is prepared on the PC-I form. The components of the PC-I form are:

- *The project proposal is evaluated at the institutional & provincial level by experts.*
- *The institution is in it, in its turn, appoints a certain staff and establishes a certain Department which takes care of the Planning and Development Department.*
- *The project is executed by a project management team appointed by the institution under the provisions of PC-I.*

National Health Vision 2025 has been designed by Ministry of Health Services, in line with the WHO health system framework using the six thematic pillars; Health Financing, Health Service delivery including hospitals, Human Resource for Health, Health Information Systems, Governance, Essential Medicines & Technology, and an additional area of Cross-sectoral linkages.

B-1.1 Short Description of Planning Process

The planning process is per Government priorities and policies in many places. Punjab has a Policy and Strategic Planning Unit (PSPU) in the DOH that is entrusted with the responsibility of drafting the Provincial Health Policy and Health sector Strategy that aligns with the national goals and international agreements. PSPU has launched a Punjab Health Sector Strategy (2019-28) with a detailed plan for all hospitals of Punjab. In few hospitals, there is top-down planning process. On the whole, the planning process for hospitals is decentralized. In the case of KPK, the Health Department is in a better position to approve planning processes for the hospital sector.

B-1.2 System in place to Support the Implementation of Plan

After the 18th amendment, the provinces and service delivery and program implementation also became responsible for strategic planning. To meet the new responsibility of strategic planning, all the provinces established health policy units and also developed provincial health policies WHO provided technical support in this process of devolution. Punjab Cabinet duly approves

Punjab Health Sector Strategy (2019-28). Currently, all programs and projects of the health department are following the guidelines provided in the strategy. However, the government is planning to draft a detailed operational plan for effective implementation of the strategy to measure the progress towards achieving Sustainable Development Goals on time. Since it is centralized, so DoH, P&D Department, and all relevant departments support implementing the plan.

B-1.3 Results of the Last Plan (level of accomplishment of objectives)

Planning cells of Departments of Health (DoH) closely monitor the implementation of the plan. This includes physical work, installation of the equipment and purchases, etc.). In Punjab, PSPU had drafted Health Sector Strategy (2012-2020) for Punjab. The accomplishment included drafting and implementation of the Minimum Standard Delivery Package (MSDS), effective enforcement of strategy, and establishment of the Hospital Waste Management system. In KPK, in the last decade, key performance indicator such as maternal and infant mortality rates has been drastically improved. For example, in Hayatabad Medical Complex Peshawar there is visible improvement against targets set in the first annual plan in the post-MTI Reform Act 2015 era. Both provincial and federal Governments have acknowledged them.

B-2 Main Gaps and Challenges in This Area

Significant gaps and challenges are;

- *To establish the departments of Planning and Evaluation in hospitals*
- *Appoint staff, which is fully trained in the planning and evaluation process*
- *The planning units in hospitals should be the recipient of hospital-based information – patient burden, disease burden, inventory management system, etc. They should have their analytical wings so that they can correlate which facilities of the hospitals have been saturated, overburdened, and hence need expansions.*
- *Similarly, the cells should be able to identify underutilized facilities and make suggestions to the decision-makers regarding the retention, expansion, or dissolution of facilities.*
- *A futuristic approach should be adopted, and the modern planning process is the creation of long-term plans, medium-term plans, and short-term plans.*
- *Integrated people centered health services and primary health care approach needs to be considered in the planning process*

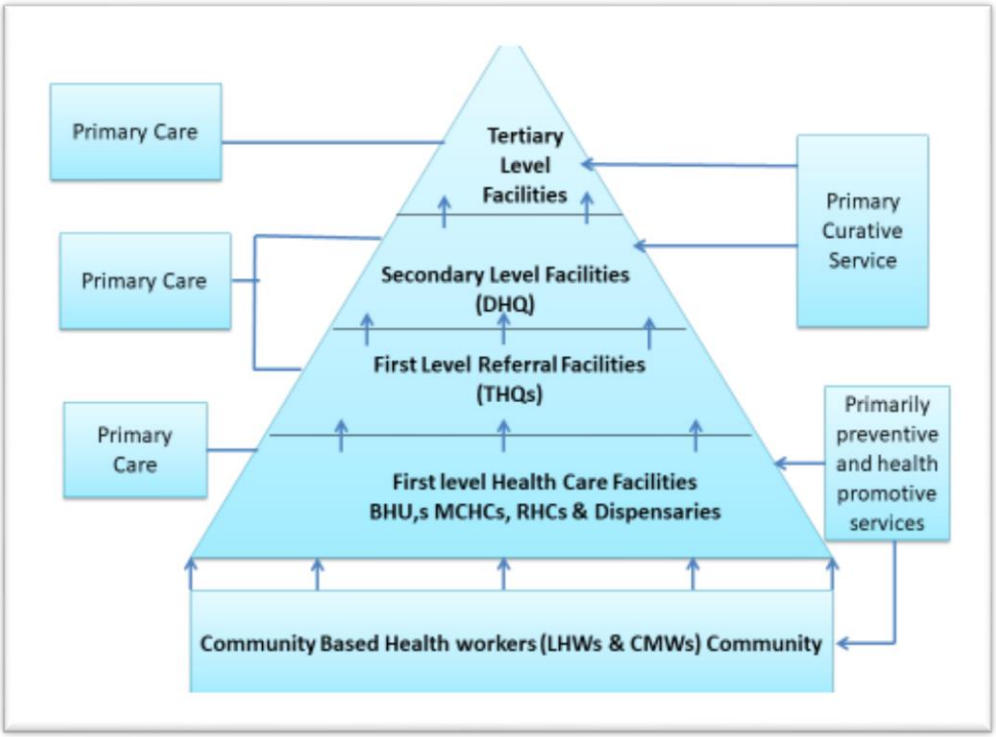
C. HOSPITAL GOVERNANCE, ORGANIZATION, AND MANAGEMENT

C-1 Current Situation, Including Policies and Strategies

C-1.1 Governance: Role of the Ministry of Health (MOH) in guiding and overseeing hospitals

The Ministry of Health or Provincial Health Departments acts as headquarter for the hospitals of their respective domains. After introducing the 18th Amendment to the Constitution, healthcare is a provincial subject, and MoH has no role in overseeing the functions of the hospitals. The system for overseeing the functioning by the DOHs is not well defined or in place. Decentralization has been introduced in all teaching hospitals in Punjab by creating their **Boards of Management**. However, the broad composition and scope are defined by the provincial health departments. Health Departments, within their own jurisdiction. Are independent to make such decisions for achieving optimal results.

Figure 2 MoH; Overview of the health service delivery in Pakistan



At the federal level Pakistan Institute of Medical Sciences, the PIMS leadership does not have direct authority over recruitment or flexible contract-based staffing for meeting its current or intended Islamabad Capital Territory (ICT) delivery mandate; recruitment times are very lengthy; revenues collected are returned to the Federal Ministry, and there is no room for fundraising.

Provincial Health Care Commission supervise the accountability mechanism of public and private hospitals at provincial levels. This include their registration, licensing, and renewal. In Punjab, the accountability mechanism based on the attainment of standards prescribed by the Punjab Healthcare Commission is in place. Hospitals are obligated to meet these standards. Regarding qualitative monitoring, robust mechanisms are yet to be evolved. However, hospital monitoring is based on complaint system.

Provincial Health Departments are focused mostly on;

- *Providing managerial autonomy to tertiary hospitals or medical teaching institutions (MTIs) and, to a lesser extent, to other public health facilities;*
- *Contracting out the provision of certain primary and secondary health services to private providers/suppliers ; and*
- *Strengthening the health information systems such ase DHIS and health management information system (HMIS) for monitoring and evaluation (M&E) of health facilities.*

The situation differs in private hospitals, like in Indus Hospital Karachi. The Chief Executive Officer (CEO) heads the entire Indus Health Network/ IHN Operations, who works in close collaboration with Board of Governors (BoG). CEO is assisted by (9) different directorates, which monitor different aspects of IHN Operations. All directorates' have their '**Organograms,**' which are linked with the Institutional Organogram, and all Directorates have defined reporting relationships, policies, and procedures for their respective functioning.

Moreover, MoH guide and oversee hospitals at different levels;

Support Departments in Private Hospitals.

Clinical Affairs: The Department of Clinical Affairs was established in Indus hospital to support the core clinical activities of the Medical Directorate both at the Management/ Coordinating Hospitals as well as at the IHN (Indus Health Network) levels. This includes controlled documentation, continuous physician's assessment, credentialing and privileging of physicians, keeping follow-up of all meeting minutes within the Medical Directorate at the head office & network level, and maintenance of the medical services performance dashboard.

Hospital Standing Committees (Private Hospital)

There are certain functions within medical services that require cross-specialty collaboration and liaison involving more than one clinical department. To streamline such functions, standing committees were established, the Chairs of which directly report to the Medical Director for that function.

Antibiotic Stewardship Committee (ASC) has the overall responsibility to develop and review the antibiotic policy periodically to optimize antimicrobials within the Hospital to improve patient outcomes, reduce inappropriate antimicrobial use and reduce adverse consequences of antimicrobial use, including antimicrobial resistance and toxicity.

Blood Product Transfusion Committee (BPTC) has the overall responsibility to implement rational use of blood products, ensuring patient safety.

Clinical Ethics Committee (CEC) is responsible for providing consultation regarding clinical ethical dilemmas associated with particular patient care decisions.

Continuous Medical Education Committee (CMEC) conducts educational learning activities regularly that contribute to the maintenance of competence in the form of professionalism, patient care, systems-based practice, interpersonal skills, and medical knowledge.

Emergency Response Committee (ERC) is responsible for capacity building of medical staff, including physicians, nurses, and technicians, through conducting various courses certified by American Heart Association (AHA) like BLS (Basic Life Support), ACLS (Advanced Cardiac Life Support),

Infection Control Committee (ICC) is the supervisory committee for the Infection Control Department with involvement from various specialties. It has an overall responsibility to review and implement infection control practices at the hospital/campus, evaluate and monitor the progress of infection control programs.

Medical Records Review Committee (MRRC) is the supervisory committee for Electronic Medical Record (EMR) Department, established to ensure appropriate and quality medical record entry as per international standards by the end-users in Health Management Information System (HMIS), oversee 'Coding of diseases & procedures' and 'Registry' being done by EMR, develop and analyze various reports including the trends of various medical conditions in the campus; and liaison with Information Technology and relevant faculty to develop or modify various modules in HMIS.

Morbidity & Mortality Review Committee (MMRC) has the mandate to critically review and analyze the circumstances leading to morbidities (worsening of illness) and mortalities (deaths) in the Hospital, formulate recommendations in areas of improvement including workflows after thorough discussion and deliberation; and present to Medical Directorate for implementation.

Operating Room Committee (ORC) has representation from various Operating Room users. It has the overall responsibility to develop Operating Room capacity to meet existing and anticipated demands, both elective and emergency, from surgical and anesthesiology services.

Network Task Forces With the Indus developing as Network, and TIH Karachi being its flagship hospital, it is necessary to ensure uniform quality of clinical care across campuses in various specialties.

Nephrology Task Force In the 2018 &19 Nephrology Task Force was involved in IHB –Dialysis Center and MIKD. At IHB, the entire infrastructure of the Dialysis center has been revamped along with dialysis staff pieces of training at the head office. At the same time, HOD Nephrology from the head office has started a weekly nephrology clinic at IHB (new campus).

In Punjab, the hospital is governed under specialized health care & Medical Education Department Govt. of the Punjab Lahore. The radiology department & bold bank got their licenses. Benazir Bhutto Hospital RWP'S governance includes a) The Hospital is guiding under Specialized Healthcare & Medical Education Department Government of the Punjab Lahore. b) The Hospital is autonomous, and c) The Hospital is under the process for getting registration from Punjab Healthcare Commission. The radiology department & Blood Bank got their licensees

C-1.2 Levels of Autonomy Given to Hospitals

There are mixed evidence/feedback from experience in Pakistan and other countries that hospital autonomy significantly affects hospital efficiency and patient outcomes. In Punjab, different level of autonomy has been given to various categories of hospitals. For instance, each medical university is governed by a separate Act but still is not entirely autonomous. Although different regulatory bodies, including Pakistan Medical and Dental Council (PMDC), Pakistan Nursing Council (PNC), Punjab Medical Faculty (PMF), TIB Council, Homeopathy, Pakistan Pharmacy Council, are operational in at federal level and provinces but are not truly functional. Regulation of healthcare delivery remains weak in Punjab in the absence of a well-developed regulatory framework and limited outreach of regulatory bodies.

Tertiary Care/ Teaching Hospital: Most tertiary care/ teaching hospitals are autonomous in administration & management but follow Government / Department of Health rules, regulations & guidelines.

District Headquarter Hospitals, RHCs & BHUs: The DHQs which are attached to a medical college are autonomous/ semi-autonomous whereas, all other DHQ, THQ Hospitals, RHCs & BHUs are totally under the control & management of the Primary & Secondary Health Secretariat through the CEO of District Health Authority reporting to DG Health Services.

At Federal level, Pakistan Institute of Medical Sciences (PIMS) was having a certain degree of autonomy when the medical university was finally granted authority in 2016; however, for the past five years, there has been no measurable movement. The key issues that need to be ensured are within PIMS capability and Federal Health authority, notably Managerial and Technical capacity; a) Information Systems capability; Incentives, and Accountabilities of spending over/between line items; (b) recruitment, retention, and severance of all staff; (c) recruitment by contracts/locums for all staff, especially nursing and doctors; (d) retention of part of revenues earned; (e) fundraising ability through donations and naming of buildings.

C-1.3 Accountability Mechanisms of Public and Private Hospitals (registration, licensing, re-licensing, and accreditation)

A complete mechanism has been developed and is available for public and private hospitals This include rules for registration, licensing, re-licensing, and accreditation, regulation and, monitoring mechanisms. . Pakistan Medical and Dental Council established through the act of parliament is responsible to check and ascertain all such processes are being followed and applied. In addition the provincial commissions like - Punjab Healthcare Commission (PHC) , has the mandate and authority to control the registration, licensing, re-licensing, and accreditation of public & private tertiary care hospitals as the regulatory authority, in Punjab. At present all tertiary care hospitals in Punjab are autonomous (called Autonomous Medical Institutes). Thus PHC performs a key regulatory function for both Public and Private Hospitals . The roles & responsibilities of Provincial PHCs are to;

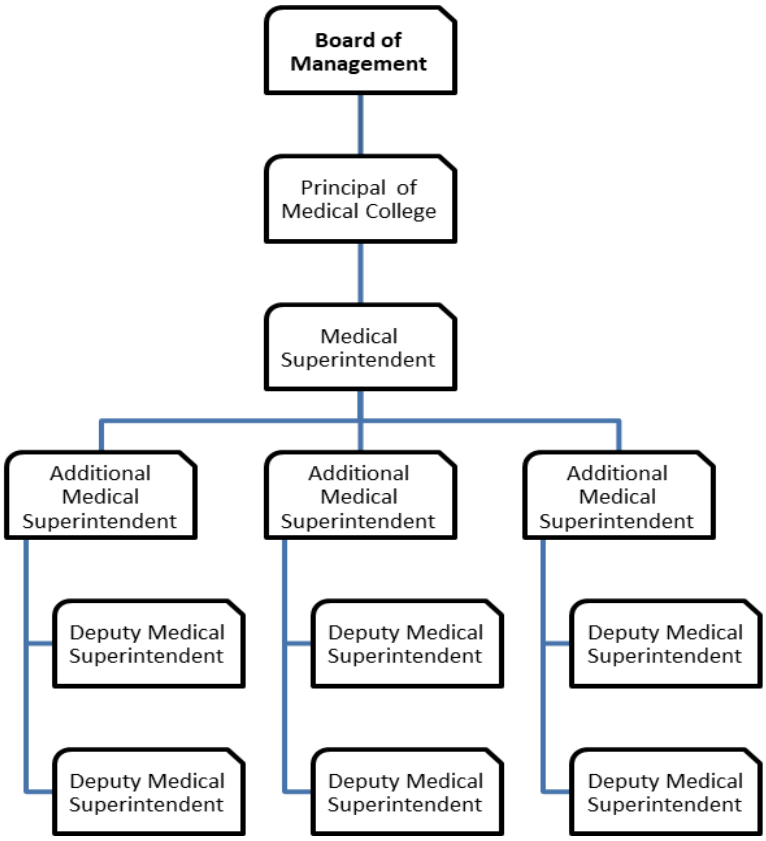
- *Maintain a register of all healthcare service providers, both public and private hospitals.*
- *Grant, revoke and renew Licenses – impose and collect fees*
- *Monitor, enforce, and regulate the implementation of Minimum Service Delivery Standards (MSDS).*
- *Inspect HCEs to ensure compliance with the PHC standards and impose fines for noncompliance of MSDS*
- *Enquire and investigate into maladministration, malpractice, medical negligence, system failures*

Similarly, Medical Teaching institutes, in other provinces are are autonomous and are governed by Board of Governors (BOG) , which is appointed and notified by Government under section 8 of the MTI Act. BOG is responsible for policy making and oversight of respective hospital . The allocation of one line budget to MTIs resulted in decentralization of organization and autonomy.

C-1.4 Decentralization at Provincial and Hospital Levels

After the 18th Amendment, an attempt was made by the Provincial Department of Health to decentralize the authority from Secretary Health to the Hospital Administrators/ CEOs, but that didn't work as anticipated. The main reason for the failure was that the Secretariat did not want to part with its authority in practical terms. At the same time, the Hospital Administrators were not experienced enough to deal with financial matters.

Figure 3. Decentralization at Provincial and Hospital Levels

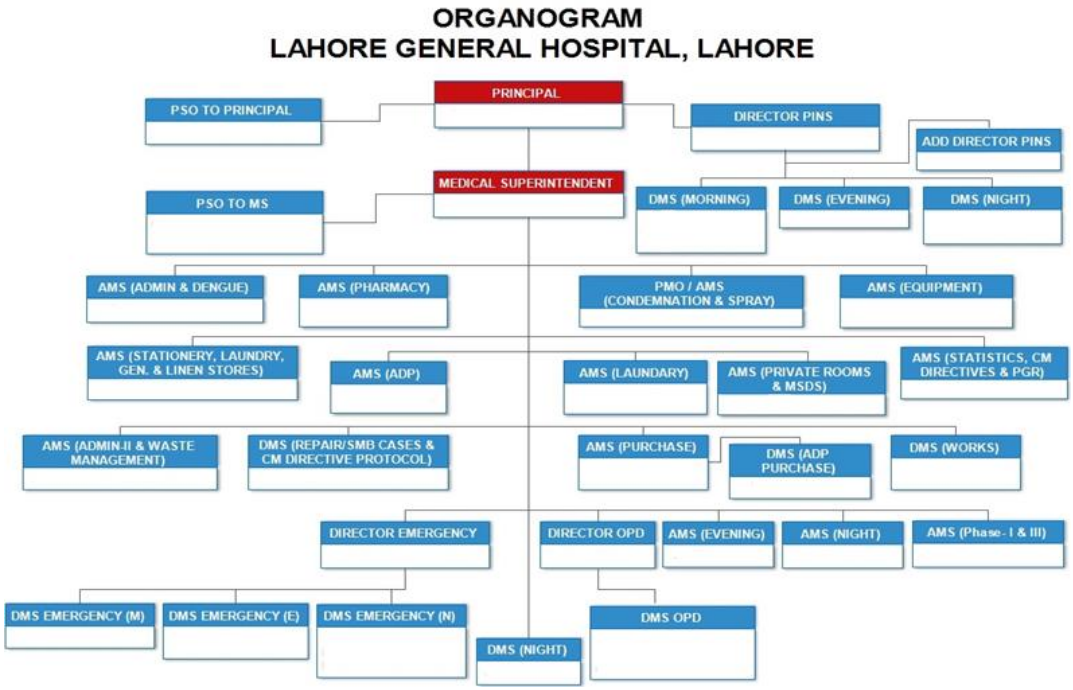


In Punjab, decentralization and autonomy is present. In KPK, Medical Teaching Institutes are governed by the board of governors appointed and notified by Government on the recommendation of the Search and Nomination Council constituted under section 8 of the MTI Act. BOG is responsible for policy-making and oversight of the Hospital. The allocation of one line budget to MTIs resulted in the decentralization of organization and autonomy.

C-2 A Standard Hospital Organogram per Public Hospital Category

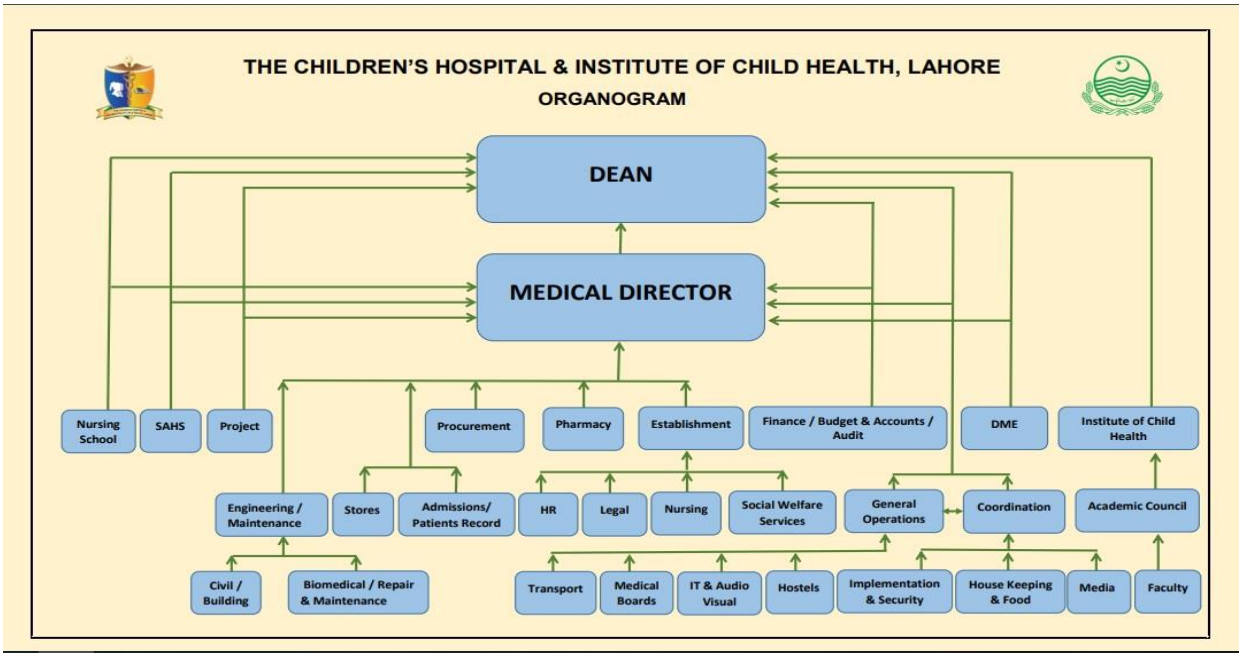
Yes, there is a standardized **organogram** approved by the competent authority, i.e., the Department of Health Punjab (attached below organograms of Lahore General Hospital.

Figure 4. Organogram, Lahore General Hospital, Lahore



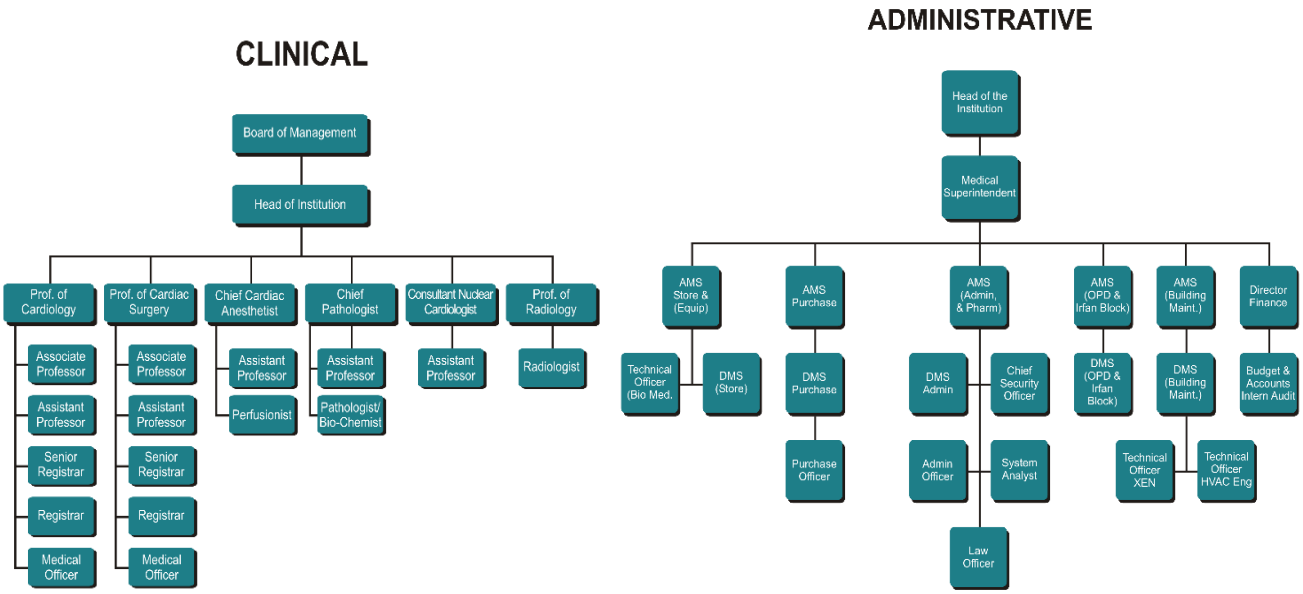
The same organogram is being followed in most of the tertiary hospitals of Punjab). Following is an **organogram** of Children Hospital and Punjab Institute of Child Health, which is a slight deviation from the routine.

Figure 5. The Children's Hospital & Institute of Child Health, Lahore; Organogram



The Institute of Cardiology is enjoying more financial autonomy than many other teaching hospitals. It has the following administrative and clinical organograms.

Figure 6. Clinical and Administrative Organograms of Institute of Cardiology



Unlike Punjab, the AJK Hospitals (e.g., Abbas Institute of Medical Sciences) are under the direct control of Secretary Health. In-charge of the Hospital is an Executive Director, and he has Joint Executive Director with him and under him. In Federal Government Hospitals, the organogram is available at each public Sectors hospital. In case of Punjab province, organograms are displayed at various offices in a hospital (Annex attached). In KPK, also, for the medical teaching institutes, there exists a hierarchy and an organogram.

C-3 Nomination of Positions and Career Management

The Hospital Director / Chief Executive Officers (CEO) are usually known as Medical Superintendents (MS). The Government nominates them. There are different procedures for the appointment of MS(s). Usually, the Government constitutes committees to select the candidates for various institutions. The selection is made after taking into consideration their service profile.

This selection committee usually comprises of;

- *Secretary Primary & Secondary Health Department*
- *Special Secretary Primary & Secondary Health Department*
- *Add. Secretary Primary & Secondary Health Department*
- *DG Health Services*

Criteria for Selection

- *Seniority List & Experience*
- *Professional Qualification / Achievements*
- *Scrutiny & Technical Evaluation of Personal File*
- *Reputation-based on **Annual Confidential Report (**ACR)*

In Federal Level hospitals (e.g., PIMS), the Hospital Directors/Chief Executive officers (CEO) are nominated as per Government services rules based on seniority cum fitness.

In some situations (like Mayo Hospital Lahore), the criteria are set by the Health Department and are advertised in the newspapers and are made public. All the candidates who are eligible and fulfill the criteria submit their applications and curriculum vitae. The Health Dept. makes a selection in Punjab and is appointed as the Chief Executive Officer. In case of Punjab, Medical Superintendent is being posted by the orders of Secretary Specialized Health Care & Medical Education Department Govt., of the Punjab Lahore, like in Holy Family Hospital. Whereas, in some hospitals, Medical Superintendent is being posted by the orders of Secretary Specialized Healthcare & Medical Education Department Govt. of the Punjab Lahore. In KPK, The positions are advertised in newspapers having wide circulation calling applications from candidates having the requisite experience and qualification. BOG finally selects a candidate based on the performance of the candidate in the interview.

C-4 Accountability Measures and Corruption Mitigation

Managements of Departments of Health prepare annual Performance reports of the hospital managers. The role of Hospital managers, over the years, has been restricted to facilitation and improvement of hospital services. They facilitate the service delivery and staff performance. This include if the clinicians are discharging their duties, providing medicine to the patients, and ensuring that the hospital's operations are conducted smoothly. The annual audit report is presented to the audit committee. The audit report comprises of external and internal audit is ultimately analyzed by the committee, and a strict checkup is kept. A proper analysis is ensured that proper SOPs are being followed by the supervisors of both Provincial health departments and the Ministry of Health.

In small provinces (e.g., AJK Province), the accountability measures are taken based on an annual audit or special audit report. This is followed by an inquiry report against the manager based on some concrete complaints and allegations. In Punjab, the internal audit structure exists. A third-party audit from the office of the auditor general Punjab is being done annual basis. The internal audit structure exists in few hospitals. A third-party audit from the office of the auditor general Punjab is being done on an annual basis. In Mayo Hospital, Lahore, for example, the annual report is presented to the audit committee. The audit report comprises of external and internal audit that is analyzed by the committee and a strict checkup is kept. In KPK, every manager is responsible for his area of work. There is a system of Internal and External Audit. Independent third parties also perform performance Audits. All these activities are aimed to mitigate corruption to an acceptable low level.

D. MONITORING

D-1 Hospital-Performance Monitoring

The performance of the Hospital is usually monitored based on services provided by the hospitals, e.g., increase or decrease in the number of OPD patients, the number of successful surgeries, death rate, infection rate, and training courses a hospital offers during a specific time period, etc. Usually, the information about service delivery is generated and is submitted to the Government through an instrument known as '**Annual Health Return**.' The information contained in the Annual Health Return is collated and shared with the institutions. However, a comparative analysis of performance amongst the hospitals is not done.

In Punjab, the monitoring of primary and secondary healthcare facilities is usually conducted by Monitoring and Evaluation Assistants (MEAs) working under PSPU of DOH for real-time monitoring data on Android devices. In Punjab, hospital performance is monitored based on services and facilities provided e.g.

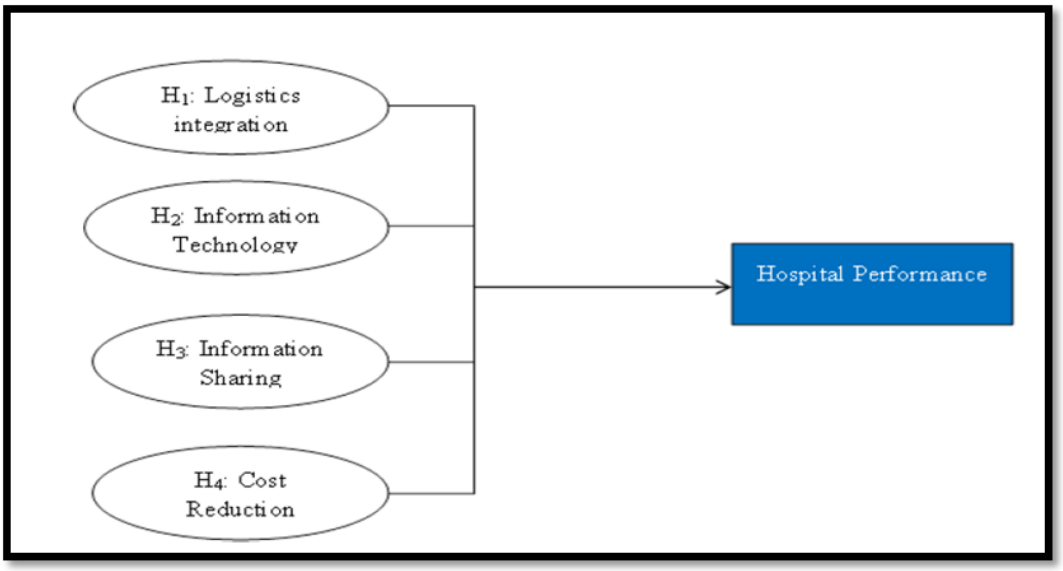
- *Trend in increase or decrease in patient visiting the Hospital*
- *Successful surgeries*
- *Infection rate*
- *Death Rate*
- *Training courses etc.*

In case of Benazir Bhutto Hospital, RWP, on clinical site, the head of the department conduct monitoring and supportive supervision. On the administrative side, the concerned in-charge conducts monitoring and supportive supervision. M&E system's objective is to ensure the provision of rigorous and reliable third party data of primary and secondary healthcare facilities on the following main indicators;

- *Staff Posting & Attendance*
- *Medicine & Supplies*
- *Equipment Functionality*
- *Disposal of Hospital Waste*

While in KPK, an independent monitoring unit (IMU) has been established to monitor and evaluate all public sector health care facilities. The IMU is expected to help facilitate optimal utilization of public health facilities and in making evidence-informed decisions. However, the Monitoring & Supervision is being carried out in different timings and events but not as per SOPs or selected indicators in Baluchistan. In the context of performance evaluation of Human resources for health, doctors get evaluated by the Head of Department of the assigned unit and paramedical staff by the Sister In charge of the unit. The Independent Monitoring Unit of the Health Department also carries out monitoring activities against Key Performance KPI. The hospital P&D (Planning and Development Unit) role is to collect data on Hospital performance and oversees the day to day work of various administrative units such as waste disposal, service delivery, facility management, pharmacy, hospital accommodation, procurement, and HR-Management.

Figure 7. Performance of Hospital



D-2 Rewards / Sanctions against Good/Poor Hospital Performance

In general, the performance appraisal of hospitals is not part of a policy framework, and hence the reward or sanction system does not exist or is applied in its full form. But any person who is found to be involved in any kind of corruption or malpractice is usually punished in terms that his increment may be stopped upon the advice of the department and rewards sanctioned against good performances in the shape of honorariums and extra salary.

Disparities exist in various provinces on the subject, as in Punjab. In the context of Primary and Secondary health facilities, there are clear SOPs to assess & evaluate the good/poor hospital performance in CEOs and M.S monthly meeting/video conferencing at the Secretary Primary & Secondary Health office. There are some well-defined indicators forming CEO, and M.S monthly scorecard and grading of Hospitals are made based on the same to reward/ punish the management & staff of the respective hospitals who tops the chart from above or below. In Punjab, the promotion to the next scale as per rules is a reward. Besides appreciation, letters are being issued to the best workers. In KPK, there is no such culture to give performance base awards through the KPK government has expanded HRH through better incentives. Like employees in other departments, health employees are also bound to sanctions.

D-3 Main Gaps and Challenges

The quality of the services extended by hospitals is not assessed on defined parameters. In case of Punjab, however, no main gapes and challenges are there. In case of KPK, the Public sector in general and the Health sector asks a performance management system. Moreover, various gaps in the monitoring system of the hospitals can be identified overall;

1. *Lack of well-defined KPIs to monitor the performance of uniform criteria.*
2. *Poor quality of reporting (authenticity/reliability questionable).*
3. *Qualitative assessment of performance is not done.*
4. *No culture of using information (based on monitoring reports/evidence-based) for decision making.*
5. *Inconsistency in the rewards/sanctions system of hospital managers.*

Conclusion

There are many legislations, frameworks, and policies of the healthcare system on the national level and local level. Impressive progress is seen in strategic policy framework for the development of hospitals or the distribution of beds in many hospitals. Coordination and data sharing among healthcare facilities and providers and other health system entities, resulted in positivity and continuity of care. The current referral practices are based on a blend of telephonic, documented, and electronic communication. Framework for establishing private hospitals based on population is working under progressive and considerable measures. Hospitals and healthcare institutions are provided with high-end facilities, serving affluent areas and cities, with market principles (demand & supply and affordability) that is the driving force. The promotion of cost-effective approaches varies from institution to institution, and at times, within the institutions. The essential service package for hospitals is different at different levels. The current mechanism for the distribution of hospitals is based on geographical and population-based. In Public-Private Partnership of hospitals, Sehat Sahulat Cards are the best example. The main gaps and challenges in this area are Lack of Facilitation at the government level, illiteracy, Lack of community health services, and Dependent population.

In the National Strategic Plan as Part of the National Health Strategic Plan, there is very gradual progress. However, the planning process at the provincial level is in line with the National policies. We all know that after the promulgation of the 18th amendment, health has been devolved as a provincial subject. The planning process is per Government priorities and policies in many places. The main Gaps and Challenges in this area are the need for staff appointments in hospitals in planning departments and a futuristic approach with the modern planning process.

In the case of hospital governance, organization, and management, the role of the MOH in guiding and overseeing hospitals is significant. Unluckily, MOH has no success in this field till yet. However, Decentralization has been introduced in the hospitals by creating their boards of management. A minor role of MOH can, however, be seen in guiding and overseeing hospitals at different levels. These levels include Support Departments and Hospital Standing Committees. There is mixed evidence from experience in Pakistan and other countries that hospital autonomy significantly affects hospital efficiency and patient outcomes.

In the case of Accountability Mechanisms of Public and Private Hospitals (registration, licensing, re-licensing, and accreditation), provinces are doing well at their levels. For nomination of Positions and Career Management, the Government usually constitutes committees to select the candidates for various institutions. The selection is made after taking into consideration their service profile. Regarding Accountability Measures and Corruption Mitigation, the supervisory officers of DOH prepare annual Performance reports of the hospital managers. The performance of the hospital is usually monitored based on services provided by the hospitals, e.g., increase or decrease in the number of OPD patients, the number of successful surgeries, death rate, infection rate, and training courses a hospital offers during a specific time period, etc. the performance appraisal of hospitals is not part of a policy framework. Hence, the reward or sanction system does not exist or is applied in its full form. But any person who is found to be involved in any kind of corruption or malpractice is usually punished with prescribed terms. The main Gaps and Challenges in this area are uniform criteria for the monitoring of hospital performance, Poor quality of reporting, no qualitative assessment, and no consistency in the rewards/sanctions system of hospital managers.

SECTION 2-- HOSPITAL FUNCTIONS

E. HUMAN RESOURCES

E-1 Public Hospital Workforce Numbers

Table 7. Public Hospital Workforce Numbers

Number of Physicians	**12888**	**Number of Nurses**	**15612**
General Practitioners	**NA**	**Number of Technicians**	**3783**
Specialists	**1996**	**Number of Midwives**	**3604**
Number of Pharmacists	**33, 455**	**Number of administrative staff**	**NA**

E-2 Current Situation, Including Policies and Strategies

After the 18th Amendment to the Constitution, provinces are autonomous in healthcare delivery as per their required regional policies and strategies. Currently, Punjab has resolved the requirement of Physicians at Primary health care by running a Punjab Residency Program, which allows for the placement of trainee doctors across various teaching hospitals in Punjab based on merit. However, there is still a shortage of healthcare providers and allied health workers in the province. There is no specific human resource departments in hospitals eg. in the biggest hospital of Punjab province ie. Mayo hospital, Lahore, placement of qualified specialists also remains a challenge compounded by the departure of specialists to other countries because of better employment prospects. Likewise, in Benazir Bhutto Hospital, RWP, staffing is for inpatients, the OPD departments has been a challenge.

The human resource department at Sindh's hospitals, e.g., in Indus Health Network (IHN), is thriving over the years towards a better and efficient performance. The departments' performance efficiency has been in alignment with achieving its goals, which have been evolving with time to meet the requirements of the organization and mark along with the best practices in the industry. A pillar of the health system is its workforce. In Khyber Pakhtunkhwa, modeled projections for medical practitioners by specialties indicate that more than 15,500 full-time equivalent doctors must deliver services to the population in 2020, growing to over 56,000 by 2035.

Most of the strategies and policies for federal or provincial hospital are made by respective authorities. These include;

- *Hiring of all types of technical and administrative staff.*
- *Retaining the staff, i.e., paying them remunerations.*
- *Long-term, short-term and medium-term policies.*
- *Human Resources Planning and Policies.*
- *Performance Management.*

- *Employee Relations.*
- *Employee Health Policy.*
- *Occupational Health and safety etc.*
- *Compensation & Benefits Policy.*
- *Recruiting qualified nurses.*
- *Followup of national /provincial/ international benchmarks.*
- *Medico-legal case management. .*

E-2.1 HR Recruitment and Orientation Policies

The hospital staff is hired either in line with the criteria and yardstick prescribed by the federal regulatory body, i.e., Pakistan Medical and Dental Council, in terms of the teaching and research staff and/or the one defined by the provincial government for management and support. The recruitment, however, is centralized, i.e., through the Public Service Commission or institutional/regional, i.e., through selection boards constituted by the provincial Health Department / institutional selection boards. Also, recruitment and orientation policies as (Centralized recruitment) through Federal Public Service Commission (FPSC) as per recruitment rules and availability of sanctions vacant posts as per Basic Pay Scales (BPS-16) and above grades.

In hospitals of Punjab, there are Centralized and local recruitment and orientation policies. There is an HR manual in KPK. In Indus, Improvement in the recruitment and selection process to build and maintain a diverse and talented workforce and ensure timely hiring of critical positions. This year the recruitment section has mainly focused on redefining and managing controls of recruitment steps.

E-2.2 Staff Performance Management

The existing performance appraisal system is obligatory for promoting employees to the next higher level and not linked with the grant of annual increment/performance increment/honorarium. A competency dictionary based on the Harvard model has been developed for Performance Management in various departments. In all the provinces it is based on a conventional Annual Confidential Report (ACR) system. In Punjab and KPK, HRMIS (Human Resource Management Information System) is now implemented and is gradually being used to manage and evaluate certain cadres of employees, but need improvement. . Also Professional Development system is present. Promotion is seniority cum fitness capacity as per government rules. Capacity building is a continuous process that ended exists. Performance Appraisal System is Present is also present in few hospitals. Capacity building is a continuous process in tertiary hospitals, but is mostly being a neglected and an irregular feature. This refers to an ongoing process by which individuals, groups, organizations and societies increase their ability to perform core functions, solve problems, define and. achieve objectives, and understand and deal with the development needs in a broad context and. sustainable manner.

E-2.3 Career Paths/Professional Development Systems

There is officially designed career path or career counseling guide for hospital staff, at few places. Job descriptions, orientation, and induction training remain, however, less defined as a whole, creating leeway for poor performance and outcomes without any accountability or recourse. The progress along these measures is sluggish. Promotion is based as per government services rules that are seniority cum fitness.

In Punjab, Professional Development System is Present in hospitals. In Indus Hospital Karachi, IHN recognizes its progress as the network is built on the wellbeing of patients and its employees. To become the employer of choice of the current employees and potential employee's ER has focused on strengthening the relationship between them. Concerning this, some of the following policies have been successfully implemented: a) Whistleblowing b) Employee Health Policy, c) Occupational Health and safety, etc.

E-2.4 In service Training

In most of the cases there is orientations and on-job trainings in hospitals, but this lack comprehensiveness. Most tertiary hospitals provide PG training in subjects of e.g., General surgery, General Medicine, Pediatrics, Pathology/Microbiology, Gynae & Obs. For technicians, there are in-service training schools attached with District and Tertiary Hospitals. .However this area needs serious consideration. In-service training facilities or opportunities are on the whole scanty and few. Currently, the hospital staff in the public sector acquires the skills through experience and conditioning while working in a given environment. In Punjab, in service and on the job training are available in most of hospitals. In Indus Private Hospital, there are also steps being taken for training and development such training programs. .

E-2.5 Occupational Health and Safety

It exists but with deficient resources like incinerators, and hospital waste is burned or dispose of with the use of chemicals. Certain measures, such as fire safety, are there, but other measures, including annual health check-ups of staff, do not exist. However, Punjab has established a comprehensive hospital waste management system for infectious and noninfectious waste. However, the staff remains exposed to occupational hazards such as body fluids, infectious materials, hazardous materials, needle-prick injuries, etc. To become the employer of choice of the current employees and potential employee's Employee Relations- ER has focused on strengthening the relationship between them. Concerning this, the Occupational Health and safety policy has been implemented successfully. In Punjab, occupational and health safety exists with on subjects like

- *Personal protective equipment*
- *Infection Control Praraes*
- *Use of incinerator etc.*

In most of the hospitals, SOPs are in place now in hospitals. They are implemented in key areas, such as in areas dealing with infectious diseases. Hospital staff is immunized against preventable diseases. Staff working in the Radiology department is facilitated as per the standards of the Pakistan Nuclear Regulatory Authority.

E-2.6 Social Life and Corporate Culture

The hospitals are usually a huge structure, and the work-life does not blend with the social life. In Indus Hospital this factor is a big challenge that needs to be overcome. In Punjab, cooperative culture is unluckily not applicable.

E-3 Main Gaps and Challenges.

Both the Federal and Provincial hospitals are facing a severe shortage of hospital workforce, particularly nursing staff. There are most hospitals lack of clear planning / benchmarks for staffing to which they could adhere to. It was observed that .staffing ratios in the patient wards, for typical averages in other countries was one nurse for every 11 or more beds in Pakistan compared to 5-9 in other developed countries. . The severe shortage of nurses significantly affect the quality of care, particularly in intensive care units. For example, PIMS- Hospital in Islamabad, is a major hospital is facing sever deficiency of workforce specially nurses and paramedics, main gaps observed here are as follows;

- *Absence of a robust performance appraisal system linked with incentives and the absence of powers to take corrective action in case of deviant staff members*
- *Ill-defined career progression and Sluggish progress of staff*
- *Non-existent training facilities for hospital staff and Nonexistent occupational health and safety measures*
- *Absence of t culture of merging corporate life with social life such as annual dinners or Eid-Millan parties provides opportunities for interaction at the family level and team building.*
- *Moreover, there was absence of equity amongst various tiers of hospital staff in the utilization of facilities such as cafeteria and others and Non availability of staff satisfaction survey.*

In Punjab, there is a limited number of resources compared to consumers, a few doctors, medics, paramedics, and attendants in the Hospital and many selections on Adhoc seats e.g., in Mayo Hospital Lahore. In Indus, there is a need to anticipate the effect on the health workforce and the competitive labor market in the healthcare industry, the challenge of retaining and attracting skilled professionals; it is crucial for healthcare providers to foster their reputation as good employers by offering professional development, and an efficient work environment. In KPK, there are Deficient health care providers (MOs, Specialists' Nurses. Paramedics and other support staff. Moreover, there is a lack of qualified staff and sufficient opportunities for training on the job. Moreover, in KPK, there is;

- *Lack of a performance management system.*
- *Low on the priority list of professional bodies (More focused on career development of individuals than professional development and safety of both physician and patient)*

F. FINANCING

F.1 Hospital Funding

F-1.1 Hospital Funding at a National Level

Public hospitals receive funding from the Government. The Government allocates funds at the time of annual budget-making. The public sector hospitals or not meant for revenue generation. Whatever income they generate is usually deposited back with the Government. The public sector hospitals usually do not receive any external funding.

In the case of Nonprofit organizations, like Indus Hospital, sources of hospital funding at the national level & International Level include government grants, government funding against approved budgets (as per agreements / MOUs / Contracts), a private donation from individuals, the corporate sector, NGOs, Trusts, etc., lab outsource services, donation in kind, International funds collection centers (Friends of Indus hospital- FOIH) in various countries like US, UK, Dubai, Canada, etc., installation of donation boxes in various stores, offices and other public places, etc., seminars, sports events, local celebrities, and other funds generation activities.

In Punjab, Mayo Hospital is a government hospital operating under Government of the Punjab Specialized Health and Medical education and finance department. In the context of sources of revenue for public hospitals of government-managed by Indus Hospital, the Government prepares annual budgets where certain funds are approved for the health sector. These budgets are further bifurcated/distributed to various health care facilities. Sources of revenues for these public hospitals, managed by most of hospitals, are as under;

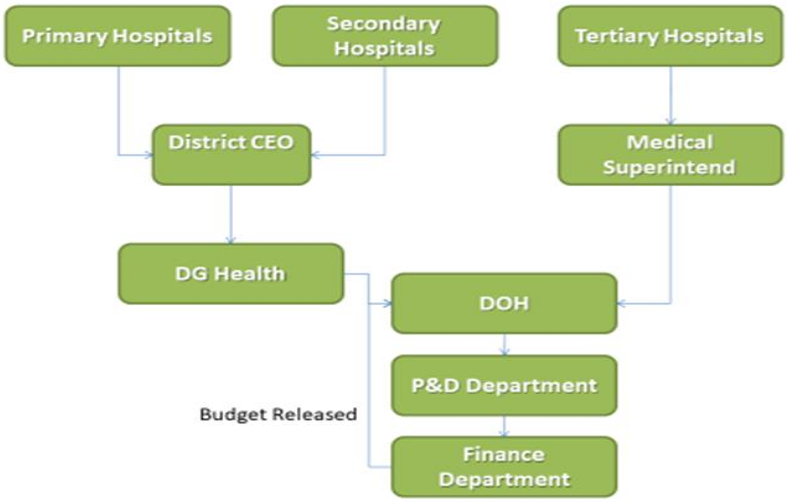
A. Public Sources

- *Government revenues (Domestic)-*
- *Direct tax (income tax, payroll taxes),*
- *Indirect tax (value-added tax),*
- *Non-tax revenues*
- *External funding - Grants (bilateral/multilateral), Loans (bilateral/multilateral)*

B. Private Sources

- *Out-of-pocket payment, Voluntary prepayment (e.g., private insurance)*
- *Other sources of revenues*

Figure 8. Flow of Funds for Hospitals.



F-1.2 Sources of Revenue for Public Hospitals.

Funding is according to per patient/per day for different hospitals and as elaborated in the previous section. In the case of AJK also, the Government provides an annual budget to MoH and other departments from its own revenue. Revenue generated by hospitals, e.g., OPD /indoor /test fees/procedures, is deposited in the government treasury. In Punjab, sources of revenue of Mayo hospital, Lahore and all other hospitals are:

- *Car parking fee and fees received from a contractor*
- *Canteen Contract charges received from contractors*
- *User Charges (Diagnostic tests)*

The revenue mentioned above was collected from the private contractors and deposited into the Govt. Treasury. (Government of Punjab). The Khyber Pakhtunkhwa health system is financed by government revenues, private funds, and external sources from developing partners. In FY2016, private out-of-pocket (OOP) payments accounted for the largest share of total health expenditures at 72.4%, with government revenues at 16.4% and contributions by official donor agencies at 0.9%. Federal transfers, which are sourced mostly from general taxes from income and sales, constitute the main source of government revenue funding in the Government of Khyber Pakhtunkhwa. They make up nearly two-thirds of the total budgeted revenue in FY2018. Other relevant sources of income include foreign loans (about 9% of total), foreign grants (about 5%), provincial tax receipts (about 4%), and profits from hydroelectricity (about 3%). The provincial finance department then provides the financing to the provincial government, including for the delivery of health services by province-managed health care providers; and funds to the district governments, which are then obliged to spend the money on health for their constituencies.

F-1.3 Any National Guidelines for Level of Funding in Public Hospitals

Funding is according to per patient/per day for different hospitals. In KPK, as the major source of revenue in MTI is the one-line budget/ grant of the government, MTIs must comply with fiduciary rules and general financial rules. There are no National guidelines for defining the level of funding for public hospitals. The provincial finance department makes the fund allocation after considering the financial spending of a public sector hospital in the preceding year. Usually, funding is according to per patient/per day for different hospitals. The major determinants of the allocation are;

1. *Salary Component*
2. *Procurement of medicine and other supplies*
3. *Utilities*
4. *Transportation*
5. *Maintenance & Repair – Building, Equipment, Machinery*
6. *Others*

In AJK, Government has public finance rules and hospitals and other departments have to comply with these rules. As the major source of revenue in MTI, KPK is the one-line budget/ grant of the government; MTIs must comply with fiduciary rules and general financial rules.

F-1.4 Formulation of Budget Allocation to Hospitals

The budget allocation to a hospital is done after considering its last year's spending on salaries, procurements of medicines, and other hospital supplies. Each year the budgetary allocation is increased to meet the increase in expenditure resulting from salary escalation and price hike of essentials. Regular Budget for running expenditure provided by the provincial government. Annual Development Program issues development Budget through PC1. However, the enhancement in allocation is done by the government, and it may not cater to all the needs

1. *Regular Budget for running expenditure provided by the provincial government*
2. *Development Budget is issued by Annual Development Program though PC1*

In KPK, in response to an invite to request (budget call circular) from the finance department, MTI- Hayatabad Medical Complex Peshawar consolidates its annual demand and sends the request to the finance department Government of KP. The Finance department usually has a cut on-demand to which is called rationalization; the demand is matched to the available funds and is approved for each MTI. In AJK, the hospital usually prepared the budget, keeping in view the last year's expenditure and coming needs of the institution, but the government allocates budget according to its resources.

F-1.5 Allocation Formula Used by National/Local Authorities

There is an allocation formula used by the national/local authorities for appropriate funding. The formula derives its variables from the hospital (Teaching, non-teaching, tertiary level, secondary level etc.), number of beds, number of specialties and others. Per Patient per day, formula is also

used for THQ, DHQ and Tertiary/Specialized hospitals. For poor patients, special grants are also issued. Chief Minister Grant is also issued to specialized hospitals. In AJK, the budget for a hospital is allocated according to the level of hospital, services that the hospital provides, the population of the catchment area and previous disease trends. In KPK, There is no concept of zero-based budgeting. The budget allocated to all departments, attached departments, and institutions is incremental budgeting adjusted for estimated changes. Hence there is no formula used in the allocation of funds.

F-1.6 Average Percentage of Fund Allocated to Public Hospitals

In Pakistan, the budgetary spending is low. 2.4 percent of the GDP is allocated for health. Approximately 60% of this budget is allocated for the hospitals. Over the last few years, Punjab has seen a substantial increase in the health sector expenditures. The overall health sector budget allocation increased from PKR 91.057 billion in 2015-16 to PKR 153.175 billion in 2017- 18 for P&SHD (Primary & Secondary Healthcare Department). Total allocation for ongoing or new development schemes in the Punjab province is PKR 32000 million i.e., PKR 16000 million for Specialized Healthcare and Medical Education and another PKR 16000 million for the Primary and Secondary Healthcare. As the priority shifted to the primary health care for strengthening the preventive and promotive aspects of healthcare service delivery, in 2015-16, the Punjab Government bifurcated the department of health into two: Primary and Secondary Healthcare Department and Specialized Healthcare and Medical Education Department. Over the last few years, Punjab has seen a substantial increase in the health sector expenditures. In AJK, the total MoH budget for the financial year 2019-20 was 9690 million. The hospital budget was 3752 million, which 38.6 % of the total budget. In KPK, the budget for secondary health care. Facilities have increased more than 3.4 times over the last 5 years (2012–2013 to 2016–2017).

F-1.7 Average Share of the MOH Budget to Primary Health Care, Curative Care, Daycare

Curative Care receive higher budgetary allocation than primary care. On average, 36% budget of DOH is for preventive care, 1% for primary curative, 17% for secondary curative, and 42% for Tertiary curative healthcare services . In AJK, for PHC, it is 38.6 % of the total, while the budget for inpatient and outpatient is not available separately. On the whole the total budget for curative care is 38.6 % of the total ADP (Annual Development Program) is not included in this budget.

F-1.8 Rewards/ Sanctions for Hospital Performance Poor/ Good

To measure the performance of hospitals, guidelines are given by the Punjab Healthcare Commission. Sometimes rewards are given if the performance is good, but usually, a Performance appraisal system for hospitals does not exist. CEO conference is conducted every month by Secretary Health, Punjab. The agenda of this conference is to check the performance of hospitals and reward the managers, financially or in other ways of awarding . In AJK also, the culture of reward dos not exist, but poor performance is questionable.

F-1.9 Purchasers and Payments

The main purchasers of hospital care belong to the low socio-economic group. Their patronage cannot be considered as the financial mainstay of hospital funding. Resource allocation is not done rationally but depends upon the expenditure incurred in the preceding financial year. The insurance system for purchasers of hospital care exists, but it does not encompass the entire population. The Insurance System is available in private as well as in the public sector. However, in both sectors, it is voluntary.

In KPK, the major purchases of the hospital are medical equipment, medicines, drugs, surgical disposables, and other consumables for housekeeping. The hospital Director being Principal Accounting Officer has direct control over procurements and allocation of resources to various units. Being a public sector hospital, all patients are charged with nominal charges. Even if there is an investigation that cannot be afforded, the hospital Director is authorized to render a service free. On average, 15%- 20% of the investigations are provided free. There are no charges for consultancy and bed occupancy in public sector hospitals. Medicines are provided by the hospitals as well. But then there is a limitation to this provision of free medicine. The limitation is partially compensated through

- *Zakat funding*
- *Bait ul Maal*
- *NGOs*

In AJK, resources are allocated according to the previous expenditure and need-based. For poor and needy patients, the government pays for them from the Zakat Fund. All payments are made according to rules and regulations.

F-1.10 Contingency Budgetary Mechanism in Case of Unexpected Events

Yes, each budget contains ahead for a contingency to meet any unforeseen unexpected events. In AJK, in case of any emergency or outbreak of epidemics', the government provides special grants according to the contingent plan submitted by MoH. In KPK, in case of unexpected events, the hospital spends from its allocated budget and then request the secretary health of the province and finance department to reimburse the amount. It is the sole discretion of the finance department to accept the request or regret it. In case of unexpected events, the hospitals spend from its allocated budget and then request the secretary health of the province and finance department to reimburse the amount. It is the sole discretion of the finance department to accept the request or regret it.

F-1.11 Level of Financial Autonomy in Public Hospitals

Public hospitals have limited autonomy in financial matters. Annual Development Program issues grant to the finance department, and then the development wing sanctions the budget to all hospitals. Public sector Hospital serves the lowest socio-economic group, and they depend purely on support from the government. They are not meant for revenue generation. They receive their

operation funding from the government and investment budget for equipment, building, and major works.

In AJK, Hospital MSs falls in category II (i.e., Category II HCEs – Hospitals having bed strength from 1 to 49 Beds Subcategorized), and their financial autonomy is as under;

- *For purchase of Medicine up to Rs. 100000/- at a time*
- *For Equipment Rs. 300000/-*
- *For Diet of patients Rs. 150000/-*
- *For consumables Rs. 50000/-*
- *For bedding clothing Rs. 50000/-*
- *For cut gut switchers Rs. 50000/-*
- *For pay and allowance, it is according to budget*

F-1.12 Investment Budget

Apart from the normal budget, Annual Development Plan (ADP) is available (for construction, installation of equipment, repair work). According to this plan physical targets are set in, and financial implications are made accordingly. Progress is monitored by the planning cell at DoH. In KPK, as the budget is provided in one line, it is the Board of Governors to allocate the budget to various account heads. Being the public sector, hospitals are bound to abide by financial rules and Regulatory orders issued from time to time. The hospital holds funds under these rules. For public sector entities, investment is disallowed by rules so they cannot hold investments.

F-1.13 Financial Audit/Control Mechanisms That MoH/MoF Employs in Hospital Sector

Generally, it's the responsibility of the Auditor General of Pakistan. The hospitals have their own Finance departments. Finance departments manage all the financial transactions of the hospital under the rules and regulations defined by the government each year. In KPK, there are dual controls in place. The MTI has its own audit department independent of management. The director of the audit also audits the transactions of the MTI once a year. In AJK, all expenditures are done according to rules and regulations. No payment is made directly, before or after expenditure bills for payment are submitted to the accountant general office for payment; at this office, bills are checked for the legality, and then payments are made. At the end of the financial year, the audit is done by the accountant general office.

F-1.14 Percentage/Absolute Amount (Flat Rate) Of Charges Paid by the Patients

Medicines, most inpatient prescriptions, are free with some exceptions. In the case of patients admitted for elective surgical procedures or conservative treatment and all emergency patients, medicines that are not available in hospital pharmacy, the Hospital director can sanction the local purchase of medicines from a private contractor selected through a competitive process. Diagnostic Tests/services are also free for an inpatient with some exceptions. In Punjab, for public hospitals, nominal rates are paid by the patients for admission and tests. For private hospitals, the following is the main sources of revenue (Punjab Healthcare Commission Costing and Pricing of Services in Private Hospitals of Lahore Summary Report):

- *55% from Inpatient*
- *10% from outpatient*
- *20% of Medicines*
- *15% Tests/services*

In Mayo Hospital, Lahore, nothing charges from patients for any inpatient or outpatient services offered by Hospital; everything is paid by the health department and Govt. of Punjab. In KPK, Inpatient Care: Admissions charges of Rs. 200 per patient, OPD Charges: Rs. 20

F-1.15 Funding in Hospitals for Diseases

The budgetary allocation for vulnerable population groups is not there. In AJK, for a vulnerable and poor group of the population, the government provides funds from the zakat fund. In KPK, there is, unfortunately, not much flexibility as funds are often inadequate. However, after introducing MTI reforms, the hospitals are better equipped and have more funds for the purchase of medicines. As mentioned earlier, Hayatabad Medical Complex Peshawar has a strict policy on equal treatment of all segments of the population. Every patient is provided the same facilities irrespective of gender, faith, socioeconomic status, ethnicity, and even nationality. The government allocates separate funds for Zakat to pay for the poor. Similarly, Baitul Mal is another modality. The salient features of the Program for Punjab are as follows:

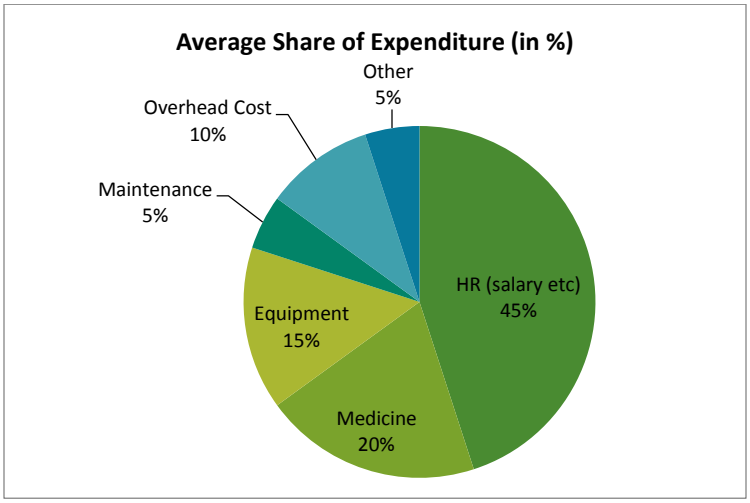
- *Beneficiaries are provided with a health insurance card*
- *The program provides two distinct packages:*
  - ✓ *Secondary care coverage for hospitalization up to Rs. 60,000 per family per year*
  - ✓ *Coverage for eight priority diseases up to 300,000 per family per year*
- *The provision of services to the beneficiaries is executed through an insurance company.*
- *All hospitalizations will be covered except for the exclusions agreed with the Insurance Company.*
- *After enrolment in the scheme, the beneficiary will be eligible to go to any empaneled hospital across the country.*

F-1.16 Average share of expenditure

A large proportion of the expenditures go to salaries; the salary head includes pay and allowances for all hospitals and ranges from 37 to 64%. The expenditure on drugs and medicines has a share between 10 up to 48% of the total expenditure.

- *Utility costs range from 4 to 21%.*
- *30 to 60% on Salaries and Bounces*
- *10 to 30% on medicines*
- *4% to 10% on utility bills*
- *5 % to 10% Maintenance*
- *2% to 5% Others*

Figure 9. Average share of expenditure



The above allocation may vary from hospital to hospital. In the hospital of AJK, Pay & allowances 68.8%, Medicines 5%, Diet of patients, 1.4 % and others (Dialysis material, Lab kits. Epidemic, Oxygen) 2%. In KPK, for the years 2012-13 to 2016-17 budget position for salary non-salary remains as under.

Table 8. KPK Budget Position (2012-13, 2016-17)

Years	2012-13	2013-14	2014-15	2015-16	2016-17
Salary %	65	76	74	76	77
Non Salary %	35	24	26	24	23
HR (Salaries and bonuses)	35 %				
Medicines	35%				
Equipment	7 %				
Maintenance	5%				
Overhead Cost	10%				
Others	8 %				

F-1.17 Major Differences between Public and Private Hospitals, mission-driven and market-oriented hospitals for Financing

Except for a few trust and other hospitals, most of the private sector has fast grown into a major profit-making hospital industry. A systematic cost analysis of public sector hospitals is not done. According to MTI- Hayatabad Medical Complex Peshawar, KPK, in the public sector of hospitals, patients are treated free of charge, even the most costly treatment modalities are subsidized. In contrast, private hospitals provide services for profits. Public sector hospitals are owned by the government of Khyber Pakhtunkhwa to which all government financial rules apply. Private hospitals are free of such oversight and have their own mechanisms.

A. Public Hospitals

1. Revenue generation is not an objective
2. All patients, irrespective of prognosis or paying capacity, are accepted.

B. Private Hospitals

1. Revenue generation is the objective.
2. The patients have to pay under the prescribed rate for all the services.

According to AJK representative, public hospitals are established to serve the population in a well-mannered way without any profit motive. The public hospital provides a vast range of services. OPD numbers show that people have faith in the public hospital.

F-2 Main Gaps and Challenges

The following are the major gaps and challenges in this area;

- *Lack of Autonomy to hospitals to generate budget*
- *Implementation of health Insurance policies*
- *Lack of consultative process to get all stakeholders involved in the budget-making process*
- *Hospitals finances are politically driven, not demand-driven*
- *Lack of training of Legislatures to scrutinize the budget approval process*
- *Lack of trained Human Resource*
- *Inadequate Funding*
- *Cost Analysis of services is usually not done in a public sector Hospital*
- *Performance appraisal of hospitals is not there*
- *A mechanism for linking the funding with the performance and with the utilization of services does not exist.*

G. INFORMATION MANAGEMENT

G-1 Current Situation, Including Policies and Strategies

The system of information in public hospitals is linked and integrated to some extent. However, they are found in different fragments at different places. The Punjab Health Department has introduced different MIS dashboards and applications run by either the Punjab Information Technology Board, Health Information System Delivery Unit (HISDU) of Primary and Secondary Health Department, or Specialized Health Department. Currently, a hybrid system is in place in most of the hospitals. The information is generated through I.T. systems as well as through manual systems. In Mayo hospital, Lahore, the environment is not paperless, but the use of paper is minimum. Briefly following is status of MIS in hospitals

- *Hospital Information Management Systems; Connection of the IT system of the hospital with the MoH does not exist; the use of IT for records and documents is limited.*
- *Medical record system in hospital (e.g., the application of the lCD); disease, service, or treatment registration systems does not exist.*
- *Telemedicine/ e-health has been started in a few departments, e.g., surgery, but in the initial stages.*
- *Promotion of information and communications technology; the level of information used by clinicians and hospital managers is limited.*
- *HIMS and HRMIS* ***(Annex attached)***

In Punjab, MoH does not exist, and IT for records and documents (paper-based). In Indus, there is a complete paperless medical facility since it started functioning. The entire medical record (HMIS) is based on the patient unique Medical Record Number (MR#) and used with various technology gadgets. Being a paperless hospital, the entire faculty, medical and non-medical users, are trained on applications according to their roles and rights. In KPK, The Government of Khyber Pakhtunkhwa has recently launched the e-Governance initiative that aims at making public service providers more accountable, but this is still in process and has yet to affect the health sector.

G-1.1 Medical Record System

Medical records systems (I.T.) has recently been introduced. In the initial phases, the OPD slips & Lab reports are being generated through the medical record system. However, ICD-10 coding is under consideration and has not yet been adopted in overall hospitals of the country. In Punjab, I.T. Cell of Primary and Secondary Healthcare Department can record, manage and report Patient Registration, Prescribed Medicines, Health Facility Wise Patient Report, and Doctor Wise Report, Patient wise Report, Medicine Wise Report, and SMS Alert. Policy and Strategic Planning Unit of the Primary and Secondary Healthcare Department were given the mandate to launch and have launched Civil Registration and Vital Statistics (CRVS) in all teaching hospitals, DHQ hospitals, (Water & Power Development Authority) Hospitals WAPDA, PESSI

(Punjab Employees Social Security Institution), and some private hospitals. The death record on this system is entered as per international ICD-10 Coding.

G-1.2 Roles of Telemedicine, E-Health, and M-Health

These are different approaches to access healthcare in remote areas or over a long distance. In Punjab, a well-established system of telemedicine, especially tele psychiatry in Mayo Hospital. Moreover, in specific remote regions, due to a lack of infrastructure, facilities, equipment, and other factors, it is difficult to offer quality healthcare. The provincial Govt. is trying to start telemedicine by clustering facilities where several facilities are connected to a doctor via laptop and internet facility. During the recent COVID pandemic, to provide timely, continuous support and facilitate the patients, the use of telemedicine, e-health, and m-health has increased enormously. Now patients can connect via Skype, WhatsApp, and Landline. This facility is now available in every Teaching hospital, DHQ, and THQ hospitals where dedicated staff, including specialized doctors. In hospitals of Punjab, however, there are no rules of telemedicine, e-health, and m-health.

G-1.3 Promotion of Information and Communications Technology

After implementing DHIS, the culture to use the information in decision making by managers has developed, but it will take some more time for full implementation. Clinician also uses information on a very limited scale. There are only a few public and private hospitals that use ICT in the whole country. In Punjab, the flow of information is computerized, and almost all the information that clinical managers require is online. It involves patient data records, medical lab reports, radiology reports, and surgical operation data, and medical records, etc. In Benazir Bhutto Hospital, RWP, it's limited. In Indus, there is a developed telemedicine application that will provide remote access to patients/doctors from far-fetched areas. There are other applications also, e.g., PACS application, from which medical practitioners can view entire patient imaging, including entire Radiology, invasive, and non-invasive Cardiology.

G-2 Role of Information Management System

The information management system does not cover anything specifically, and it is non-functional to some extent. Now the data is collected manually and consolidated at the development wing of health departments. Regarding financial flows, there is an integrated system and reconciled every quarter expenditure. This system works in a few hospitals in the country. In Punjab, both of these systems are not yet found in Mayo Hospital Lahore. In Indus, Currently, for financial accounting, there is acquired financial application from Sidat Hyder Murshid. But, recently, it is finalized procurement of Oracle Fusion ERP application for Accounting and Supply chain modules. Fusion Implementation will commence from October 1, 2020. In KPK, there is a hospital information management system implemented that records income and expenditures.

G-2.1 Integrated System for H.R. Management

At some places, there is an integrated system for H.R. management, while other places don't have. In Punjab, the system is partially available with the department with the name of "Human Resource Management Information System," It covers the H.R. component from all over the province. Still, all other components have not been developed in the system. In Mayo hospital Lahore, however, there is no such effective system yet. In Indus Hospital, being a paperless hospital, the entire faculty, medical and non-medical users, are trained on applications according to their roles and rights. HMIS covers the whole patient and health management from patient registration to patient discharge. In KPK, the HR module has an integrated payroll system that is attached to the Biometric machine. Though there are fields for personal particulars and attendance records yet for career and assessment, a traditional system of performance appraisal is followed that is called an annual confidential report (ACR). Though a system of training exists, HMIS does not capture but such.

G-2.2 Integrated System for Supply Chain and Equipment Monitoring, and Maintenance

Yes, there is, at the provincial level. In Punjab, the "Punjab Health Department" has established a Procurement Cell in 2016, which resulted in good quality medicine at the health facilities. It has decreased pilferage and increased transparency through a framework contract. Equipment Control System was launched in 2017 with the establishment of an overall equipment maintenance and repair regime. The purpose is to facilitate the government in keeping inventory records and functionality information of hospital equipment. In Punjab, also, there is no such integrated system yet. Moreover, in Indus Hospital, there are homegrown applications that include HMIS, HRMS, & Supply Chain. For administration and management of entire maintenance and calibration activity, there is an international level application. In KPK, there is a module for the asset management/ fixed asset module, but the module is not implemented as yet.

G-2.3 Integrated System for Systemic Analysis

No, there is no such system commonly seen in hospitals. However, after COVD-19, in Mayo hospital, patients can be seen on the dashboards of patient's management portals provided by SCH&ME and PHF. In Indus hospital, there also doesn't exit such an integrated system yet. In KPK, the information system implemented is obtained from another hospital and is not in-house developed. So there was no system development. In Punjab, there is no such system exists. Any customization required is requested to Shaukat Khanum Memorial Hospital, and the system is customized.

G-3 Main Gaps and Challenges

These are the main gaps and challenges at the federal level;

- *There is a lack of a functional and effectively used Hospital Information System (HIS).*
- *Lack of integrated management information system.*
- *Lack of trained manpower.*
- *Non-utilization of artificial intelligence for decision making.*
- *There is no effective leadership oversight of the HMIS, a critical management system.*

These are the main gaps and challenges on the provincial level;

- *The central gap is a proper integrated, ERP based system that should be available in the hospital so that everything is available on a single click.*
- *There is a requirement of highly trained I.T. Experts, and proper training is required for the I.T. Team to keep the system functioning properly.*
- *The whole hospital should be brought to a single network so that the integrated HMIS can be installed, and all the information is available on a single platform.*
- *Over-reporting by the field staff in the online reporting system to show results against the set targets of the programs.*
- *Fragmentation and duplication in data collection, data sharing, or leveraging common data sets between the programs and the DHIS.*

H. FACILITY AND SUPPLY CHAIN MANAGEMENT

H-1 Current Situation, Including Policies and Strategies

The hospital building infrastructure plans are according to government rules and procedures in which Pakistan Public Works Department (PWD) and other technical partners are usually included, as per requirement. Buildings Department does the construction of government hospitals in Punjab. Still, up-gradation is carried out by the Infrastructure Development Authority of the Punjab (IDAP), which is an autonomous body established under the Infrastructure Development Authority of the Punjab Act 2016, for planning, designing, construction and maintenance of infrastructure in the province.

The need for maintenance of hospital buildings is identified through physical inspections. The storage facility for drugs and medicines is not under the WHO guidelines defined for good Storage practices for most hospitals in the country. In KPK, the infrastructure of the hospitals is inappropriate in almost all facilities visited.

It included often outdated facilities in terms of;

- *standard requirements for adequate spaces (consultation rooms with less than 16 square meters and 2–3 doctors and patients inside, no equipment for clinical examination let alone of privacy);*
- *issues related to infection control (e.g., a tuberculosis lab at the dead-end of a corridor);*
- *long distances between services that should be interlinked and close to each other (e.g., ICU and operational therapy areas);*
- *basic installations for utilities (power and water supply, sanitary installations, and sewage system);*
- *solid waste management (incinerators are absent or not functional) partially due to the lack of preventive and curative maintenance; and*

In KPK, the MTI- Hayatabad Medical Complex Peshawar has a 220 canals area having a covered area of 138 canals. In Baluchistan, it is the mandate of a separate department called C&W (Communication and Works), which looks after the hospital infrastructure (building and maintenance). In contrast, security measures are by hiring security services are the responsibility of hospital administration. While in AJK, extension in existing buildings and inclusion of new blocks are part of the government's planning, and for repair and maintenance budget is allocated in yearly and in Annual Development Plan.

H-1.1 Supply Chain and Logistics

Logistics Management Unit (LMU) in Punjab comprises of "e-Procurement and Inventory Management Unit," which is an integrated system of medicines procurement. It has established a central level position of logistics management in which district procurement, drug testing labs, and prequalified manufacturers are involved. It also facilitates the medicine forecasting or preparation of rational demand based on the availability of the budget and the manufacturer's

capacity. In Punjab, such products are transported by cold chain delivery of a firm of van stored in the refrigerator. There is an Open Tender process. The responsibilities of logistics, other than procurement, such as inventory management, staffing, and product selection, are served by the district team under the supervision of the CEO. The procurements are done through an open tender basis yearly. The following are steps involved in the procurement process.

- *Directorate General (DG) Health Services prequalifies firms and items*
- *DG Health Services collect demand for medicine through the CEO of all Health facilities under its administration.*
- *CEO collects and compiles demand from all health facilities (BHU, RHC, and THQ), including DHQ Hospital.*
- *DG Health Services issue prequalification notification of firms and items.*
- *CEO office then, according to Public Procurement Regularity Authority PPRA rules, advertises tender notification inviting bids from prequalifies firms through National newspapers.*

In AJK, a Public Procurement Regularity Authority (PPRA) has been constituted for procurements headed by the Additional Chief Secretary-General. All the procurement is being done centrally, as PPRA rule 2004, and supplied to hospitals. In KPK, only essential drugs provided through the medical supply department are available at the hospital, and even for those, frequent stock-outs have been reported. Khyber Pakhtunkhwa Public Procurement (KPPP) Act and rules are available for all types of procurements. For the procurement of works, there is a department called the planning and development department. They undertake projects of construction and renovation by making and getting approved the planning commissions. All the works are procured in the light of KPPP act and rules. In Baluchistan, there is a provincial department named Medical Store Depo (MSD), which caters to the supply chain mechanism (drugs/medicine, Equipment, missionary, and other supplies).

H-1.2 Procurement and Supply Chain Mechanism for Investments

All the procurements are done through an open tender system, and according to PPRA rule 2004. Both department health and C&W (C/W Clinical decision making) make the separate budget allocations in Baluchistan, which caters to medical supplies and buildings. In KPK, all types of procurements, either goods, work, or services, are made in the light of Khyber Pakhtunkhwa public procurement authority act and rules. In KPK, all types of procurements, either goods, work, or services, are made in the light of Khyber Pakhtunkhwa public procurement authority act and rules.

H-1.3 (a) Hospital Bio-Medical Equipment

A wide range of high-quality Biomedical & Non-biomedical equipment is being supplied in the DHQ/THQ hospital to ensure quality healthcare services delivery and improved patient experience. The Drug Regularity Authority of Pakistan (DRAP) is allowed for sales and purchased according to policies and guidelines for equipment acquisition and Maximum Retail Prices (MRPs).

b) Application of Health Technology Assessment (HTA)

WHO defines health technology as the application of organized knowledge and skills in the form of medicines, medical devices, vaccines, procedures, and systems developed to solve a health problem and improve quality of life. Health Technology Assessment (HTA) is a research-based, practice-oriented evaluation of relevant available knowledge on both the direct and intended and the indirect and unintended consequences of health technologies (HTA).

The subject of Health Technology Assessment (HTA) on the whole is being poorly attended both at Federal and Provincial levels. But in Ministry of Health and Provincial departments consider this to an important factor to improve quality of hospital services and improving its efficiency. In Punjab, the District Health information system (DHIS) has been enrolled out all over the province, along with HTA.

H-1.4 Policies or Guidelines for Equipment Acquisition

The equipment acquisition is made through the need and justification of the need provided by the end-users. The institutional decision-makers assess needs and its justification. After their consent, the acquisition is made under the policies and procedures prescribed by the Government. PPRA rules are followed for the acquisition of equipment. The teaching hospitals are bound to maintain a minimum number of equipment prescribed by the Pakistan Medical and Dental Council. In general, the user department requests a demand to the Medical Director, where the demand is assessed. The demand is forwarded to the principal accounting officer (Hospital Director) for approval. If the budget is available, the requested biomedical equipment is advertised and is procured under the rules. In_Punjab, Biomedical equipment procured according to PPRA rules and PVMS as already specified by the Health Department Punjab. In KPK, the user department requests a demand to the Medical Director, where the demand is assessed.

H-1.5 Educational, And User/Technician Training

Educational and user/technician training database does not exist. However, equipment repair departments are present in hospitals. These departments are involved in the maintenance of baseline equipment but not sensitive ones. In AJK, on the job training is provided, but database linkage to medical equipment is not available while in Baluchistan, it is under concentration by P&D (Planning and Development) Department. In KPK, there is a dedicated biomedical engineering department that is responsible for the education and training of the users of the equipment. The IT department has a system of hospital management implemented that is connected to this equipment and is used for database and reporting purposes.
The system is centralized.

H-1.6 Systematic Maintenance and Equipment Monitoring

BERC (Biomedical and equipment repair center) is responsible for the maintenance and monitoring of equipment in Punjab. The system was launched in 2017 to establish an overall equipment maintenance and repair regime (BERC and revamping of biomedical workshops in

Punjab). In Holy Family Hospital, the Hospital Biomedical Department performs the daily, weekly, and monthly maintenance of equipment. There is proper system maintenance and equipment monitoring system through which online monitoring of equipment is carried out on an online software system. Status of equipment regarding functioning, non-functioning, warrant status, and life of the equipment is available on the online monitoring system. In Punjab, the majority of the equipment is under warranty in hospitals, so the concerned firm provides the department to have a PPM and maintenance services. Biomedical engineering departmental round plan that is practiced time to time.

H-1.7 Mechanisms for Outsourcing Decisions and Selection of Companies

The outsourcing and selection of companies is carried out through open bidding. The services or equipment or expertise, needed by the hospital is advertised in the national press. A technical evaluation of the bidders is done and those who comply with the technical requirements are then evaluated for their financial order. The financial offers on lowest cost basis are accepted. The official Financial and Technical bidding process/open bidding is used for the selection of companies. For an appointment, biding company;

- *Must have a registered incorporated company/firm in Pakistan with relevant business experience of least two (2) years;*
- *Must be registered with Tax Authorities as per prevailing latest tax rules;*
- *Has not been blacklisted by any of Provincial or Federal Government Department, Agency, Organization or autonomous body or Private Sector Organization anywhere in Pakistan*
- *Has the required relevant qualified personnel and enough strength to fulfill the requirement of assignment;*
- *Conforms to the clause of "Responsiveness of Bid" given herein this Bidding documents.*

Moreover, in Punjab, in Holy Family Hospital, PPRA rules are followed during the tender process of such outsourcing. Hospital technical committee evaluates and assigns it with mutual consensus.

- *Punjab Procurement Regulatory Authority rules are followed during the purchase of medicines, including outsourcing different Hospital services Like Janitorial services & Security services.*
- *All the PPRA rules are available on PPRA website.*
- *PPRA monitors all the purchases process.*

In KPK, the outsourcing arrangement is made under the KPPRA act and rules for the procurement of services.

H-1.8 Recommendations to Implement Lean Management Approaches

The lean management approach has not been adopted by public sector hospitals either at the National level or Provincial level. Significant efficiencies and resulting cost reductions can be gained by developing and implementing group purchasing initiatives where multiple facilities pool their purchases and, where possible, standardize the products. To improve the quality of medicines, the purchasing committee, in close collaboration with heads of clinical departments,

can purchase quality medicine based on a hospital formulary. This will need changes in procurement rules and regulations. Group purchasing will save money that allows for the procurement of more quality medicines. The process may include;

- *Seek and get approval for a group purchase program for PIMS and/or ICT facilities.*
- *Determine all elements of group purchase and establish/recruit a team and a Coordinator.*
- *Implement the program and cost-sharing formula.*
- *Monitor and evaluate the program to ensure efficiency gains and cost reduction targets are achieved.*
- *Purchasing committee in close collaboration with heads of clinical departments, and established formulary, to purchase quality medicines.*

In Punjab, costly prescriptions have to be approved by a senior pharmacist. For example, in Benazir Bhutto hospital, as Biomedical Engineering department comprises of only two classified Biomedical Engineers, and they are trying their best to up the system and management of equipment despite no resources and technicians. Department has an operating SoP's for such management and working, but its implementation suffers due to the non-availability of tools, workshops, proper office for record and management, and classified technicians. In KPK, after the promulgation of the MTI act in 2015, MTIs are self-learning organization and making incremental improvement, the cadre of managers have been introduced, and the conventional system of administration by Deputy Medical Superintendents and Medical superintendents has been retracted.

H-1.9 Study on Flow Analysis in Hospitals

No study at the National or local level has been done as part of action research.

H-2 Main Gaps and Challenges

First and foremost, the system lacks dedicated Human Resource to carry out key logistics task with powers and authority. A qualified person can best perform the logistics activities with pharmaceutical as well as Supply Chain Management system (SCM) knowledge. The DHQs hospitals are facilitated with a sufficient number of Pharmacists. The logistics system is better at DHQs than hospitals like RHCs, where the pharmacist is not available. The vertical programs have dedicated logisticians, but Supply Chain Management system (SCM) tasks are not achieved. Others gaps and challenges include;

- *The tendering process, which lacks negotiation with the bidders, has resulted in the high cost of the equipment to be purchased.*
- *The system itself is reasonably transparent, but the inspection mechanism, i.e., an inspection of goods and medicines, needs to be strengthened.*
- *International Standards for waste disposal are not followed by hospitals in terms of economic and financial liberty.*
- *The public sector is not flexible (in terms of economic or financial resources.)*
- *Capacity of staff in the hospitals remain limited in these areas.*

I. QUALITY AND PATIENT SAFETY

I-1 Current Situation, Including Policies and Strategies

Regarding national and local strategies for quality improvement, a healthcare commission has been established that has laid down the standards for hospitals to be followed. The Commission may inspect any hospital from time to time and can stop its functioning in case of failure to meet the prescribed standards. Currently, there is no effective strategy for quality improvement in Punjab hospitals. However, the following strategies are proposed in Punjab Health Sector Strategy (2019-2028), which is approved by Punjab Cabinet:

- *Implementation of a patient-centered healthcare*
- *Ensure assistance with activities and daily living needs*
- *Sensitization and behavior change program for patient safety and improved quality of care*
- *Minimizing healthcare-associated infections*
- *Up-gradation of laboratory services*

In Punjab, there is Functional area No. 6 CQI assigned to Punjab Healthcare Commission. In KPK, hospitals have a clinical executive board that devices strategies for attaining quality patient care. There is also a quality assurance department that ensures quality patient care and hospital administration. The hospital Clinical audit committee, a blend of faculty members and other hospital staff that has a role in patient care, meet regularly. They assign audit projects to different employees and carry out capacity building seminars.

I-1.1 Structural Arrangements for Quality Improvement

In Punjab, a dedicated department for quality assurance does not exist; however, the hospital CQI committee exists e.g., in Holy Family Hospital. In the case of KPK, There is a dedicated quality assurance department in MTI- Hayatabad Medical Complex Peshawar that works for quality improvement and benchmarks the current practices against best practices. Quality Assurance Manager is part of various hospital sub-committees.

I-1.2 Legislation and Policies Regulation Quality of Care, Hospital Registration System and Licensing and Relicensing Mechanisms for Hospitals

In Punjab, in few hospitals, the Radiology department, and blood bank have legislation; however, licensing is under process. In KPK, Pakistan Medical Council is the licensing for Health services and undergraduate medical education and training. Similarly, the Pakistan Nursing Council sets standards for Nursing education training and practices. Pakistan Nuclear Regulatory Authority regulates certain aspects of the Radiology department; the Health care commission regulates the health sector, while the College of Physician and Surgeon accredits Hospitals for PG training.

I-1.3 Patient Rights Regulation, Complaints Systems

There is no information provided on it, on national or federal level. On provincial level, regarding Punjab, patients have the right to register their complaints with Punjab Healthcare Commission. In case the authenticity is published, Commission takes corrective action. The complaints pertaining to professionalism of doctors can also be filed with Pakistan Medical and Dental Council. Moreover, there is;

- *Functional area no 4 PRE Punjab Healthcare Commission.*
- *RTI (Right to Information Act)*
- *CMS (Complaint Management System)*

In the case of KPK, PMDC. HCC grievance redressal system, Chief Minister Complaint Cell, Complaint Cell of MTI- Hayatabad Medical Complex Peshawar is there.

I-1.4 Hospital Quality Improvement Plan

In most cases hospitals are not required to develop a hospital quality improvement plan as part of existing management services, but the development of such like plan will be extremely beneficial for the patient and for the institution. So, there is an urgent need to develop a hospital quality improvement plan by each hospital, as currently, the hospital sector haven't established any such plan. However, in Punjab, The Provincial Health Commissions are the regulatory body and various policies and procedures are provided in booklet minimum service delivery standards (MSDS). Pharmacovigilance center is operational working under the command of Pharmacy and Therapeutics committee.

I-1.5 Existence of Patient Organizations

On provincial level, in Punjab, there is a Social Welfare department, Patient welfare society in few hospitals. Whereas in KPK, such patient organizations are lacking.

I-1.6 Existence of National/Local Patient Safety Program

WHO patient safety friendly hospital initiative is being introduced and planned in some hospitals in different provinces (in close coordination with MoH through Pakistan WHO country office). It is an important initiative at the federal and provincial levels.

Punjab has given special importance to patient safety and quality of care by designating a full Punjab Health Sector Strategy (2019-28) to this program. Developing a detailed operation plan for implementation in all hospitals of Punjab is currently under progress. Conducting the following conferences are also indicative of dedicated efforts for Patient safety. First International Conference on Patient Safety (ICPS) organized by Riphah International University – 2016 .2nd International Conference on Patient Safety organized by Riphah Institute of Healthcare Improvement & Safety-2017. 3rd International Conference on Patient Safety-2018. For example in Benazir Bhutto Hospital Rawalpindi , such programs exist, while there is no such program in close by Holy Family Hospital.

I-1.7 Existence of Adverse Events Reporting Systems

In Punjab, adverse events reporting system is available. In KPK, There is an Adverse Event report SOPs in place, and adverse events are reported to concerned quarters on dedicated proforma.

I-1.8 Existence of a No Blame No Shame Culture

Generally, there is no existence of such a culture. In case of KPK, MTI Hayatabad Medical Complex Peshawar has certainly a "no blame no shame" culture, but it is not practiced due to executive orders; rather, these are based on traditions. All blame or shame efforts, if any, are strictly discouraged by the top management. All levels of staff are encouraged to report with confidence in prescribed proforma.

I-1.9 Existence Patient Rights Regulation, Complaints Systems (Ombudsman), Systems to Address Medical Malpractice

PHC addresses complaints under The Punjab Healthcare Commission Complaint Management Regulations, 2014. There is a portal for complaint registration from Primary and Secondary healthcare hospitals; the complaint is registered against a Mobile number of complainant and forwarded to MS, and specific time duration is given to resolve the complaint; after resolving the matter, the complaint is drop downed. However, there is no system to address medical malpractice. In KPK, there is a PMDC, HCC grievance redressal system, Chief Minister Complaint Cell, Complaint Cell of MTI Hayatabad Medical Complex Peshawar.

I-1.10 WHO Patient Safety Friendly Hospitals initiatives (PSFHI)

WHO patient safety friendly hospital initiative is being introduced and planned in some hospitals in different provinces, This is being done in close coordination with Ministry of Health, through Pakistan WHO country office. It is an important initiative both for the the federal and provincial levels.

I-2 Main Gaps and Challenges

- *Lack of effective protocols/plans for clinical governance*
- *Weak enforcement /implementation mechanism for existing MSDS indicators*
- *Insufficient number of the qualified health workforce and poor human resource allocation across the board*
- *Lack of an effective monitoring framework for tertiary care hospitals*
- *Lack of quality of care framework and national performance indicators*
- *The subject of Quality is misunderstood and is taken too lightly. Inadequate funding, staffing, and capacity of staff cause impediment in the implementation of quality standards.*

J. DISASTER MANAGEMENT AND EMERGENCY CARE

J-1 Current Situation, Including Policies and Strategies

National Disaster Management Authority (NDMA) provides a framework/disaster management plan for national-level disaster management, mitigation, and planning. Responsibility for managing the healthcare needs during disasters falls on departments of health within the provinces. Depending on the size of the disaster and population impacted, any number of hospitals and healthcare workers can be activated to help out. Otherwise, the specific integration of hospitals into a well-structured National Disaster Management plan does not exist as such .. There are mostly Disaster Management, including mass casualty plans with following features;

- *Medical Superintendent shall be the chief controlling officer.*
- *DMS (A&E) on duty shall immediately assume the role of a focal person till the arrival of the Director Emergency*
- *He will inform the Medical Superintendent & Director Emergency shall utilize all the workforce. Operation theater equipment, medicine, etc. available to cope with the situation.*
- *Hospital Administration shall immediately establish visitor/ attendants, room, or a canopy at the distance of the main emergency area.*
- *Hospital administration will ensure the main entrance of the emergency clear of any rush of people.*

SOPs for Drug Bank A&E Department and Disaster Rack is

- *A drug bank will be started in the emergency department with the help of a philanthropists.*
- *The drug bank will be under the control of pharmacist A&E and supervised by the DMS on duty.*
- *These medicines will only be used for a patient in critical areas (ICU. CCUCOT, and A&E) in the wards only in an extreme emergency.*
- *Each item will be defaced with a stamp as HFH/ Drug Bank.*
- *Stock will be checked by pharmacist A&E and replaced periodically.*
- *Disaster cupboard (1&2) having medical stocks for an emergency will be kept on the premises of A&E pharmacy, keys of disaster cupboards will be hanged in the DMS office.*
- *These stocks will be remained locked and sealed until used for any disaster.*
- *In case of any disaster, the cupboard will be opened in the presence of DMS, Charge nurse, and dispenser/ pharmacy Technician of the current shift.*
- *All the stock consumed from these cupboards during emergencies must be entered in the expense register by a pharmacy technician with the signature of all the above members.*
- *Pharmacist A&E will be responsible for checking and updating the stock along with the quantity and expiry dates.*

In case of KPK, MTI- Hayatabad Medical Complex Peshawar has a comprehensive disaster recovery plan, which entails all kinds of risk that MTI-HMC is prone to. Moreover, the plan has detailed safeguards and responses against the enumerated threats. Mock exercises take place regularly to ensure preparedness.

J-1.1 Guidelines for Hospital Emergencies Preparedness and Response

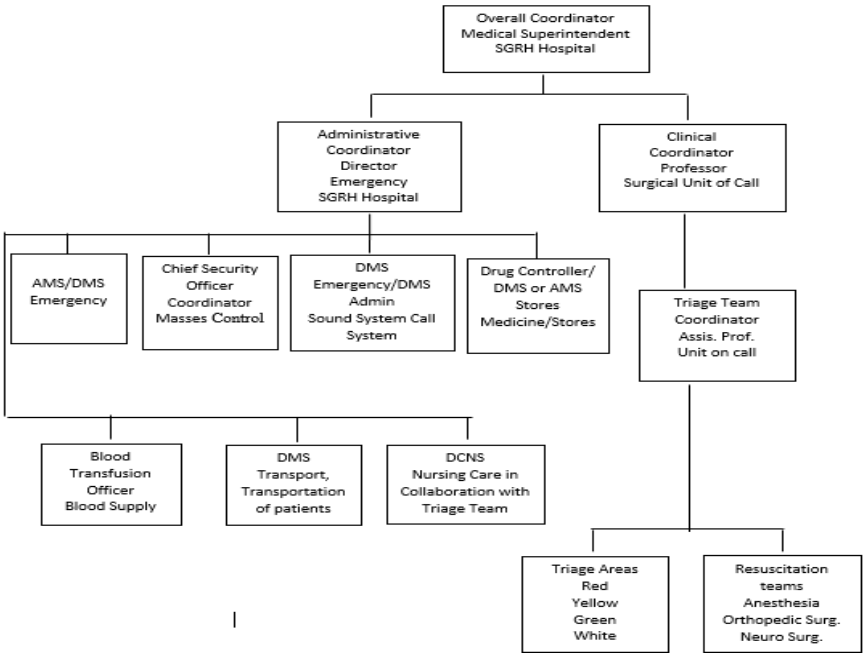
The national or provincial guidelines for developing infrastructure of Emergency Services exist, but guidelines for preparedness under the magnitude of emergency are yet to be developed. Despite the development of both national and subnational disaster management authorities, there is a serious lack of trained experts in disaster management. There is a critical lack of healthcare professionals and contingency, mitigation, and management plans delineating what needs to be done in various disasters. Disaster management is, ipso facto, a preemptive process; however, PDMA and NDMA have been more reactive than proactive, as seen in the most recent Covid-19 Pandemic. 1122 Emergency Ambulance Service provides the essential triage during emergencies and coordinates with hospitals and other stakeholder agencies and departments to streamline patient transfer from the field to the hospitals.

In KPK, the guidelines for hospital emergencies and responses are stated. Moreover, high-risk areas and assembly areas have been identified.

J-1.2 National Plan for Disaster Management Training, And Policies

Hospitals must perform evacuation and safe patient transfer during disasters (local, regional), transfer/discharge of non-critical patients to home or low-tier facilities, and turn down non-emergent patients; however, formal evacuation drills and other relevant training are more an exception than a norm. However, an extensive and all-encompassing training program does not exist, but the individual departments train their doctors, nurses, and other staff to manage the emergency.

Figure 10. Disaster Management Plan



J-1.3 Hospital Safety Index (HIS)

There is no specific Hospital Safety Index related information; however, MSDS implementation entails patient safety and quality of services, and Facilities Management Departments have been set up in most hospitals across the Punjab province. Efficacy of FMD related activities, including training and drills, remains to be seen on a provincial level.

J-1.4 Preparedness Monitoring

The preparedness monitoring system does not exist. NDMA has a detailed repository of training and guidance documents on disaster risk management, but the detail of such regular plans has not yet been chalked out. However, institutions on their own carry mock drills off & on to assess the preparedness for an emergent situation.

J-2 Emergency Care: role of the different stakeholders

Punjab initiated EMS services called "Rescue 1122" under the Punjab Emergency Service Act of 2006. Rescue 1122 provides professional pre-hospital emergency care, triage, rescue, and ambulance service to the residents of Punjab. For effective service, Rescue 1122 coordinates with the law enforcement and health departments. It provides the first responder information that determines mass triage in mass disasters, with the fastest and safest transportation of patients to the medical facilities.

"Edhi Ambulance Services" have also become an integral part of the rescue and transport system that becomes activated during disasters. In Benazir Bhutto hospital, there is Accident & Emergency Department BBH Rawalpindi SOP for disaster cupboard.

J-3 Main Gaps and Challenges

In general, the emergency services are provided by dedicated departments in hospitals, and in-patient specialty departments support the emergency department. The following are the main gaps and challenges in this context.

- *Emergency medicine and critical care are yet to be established as an academic discipline.*
- *The lack of qualified and trained human resources (clinical and non-clinical) in emergency services.*
- *Reduced allocation of credit hours in undergraduate medical education for teaching & training of emergency care to the students.*
- *Lack of inter-sectoral coordination has overburdened emergency services.*
- *Lack of clear guidance for the roles of various stakeholders, including hospitals and clinical staff.*

Conclusion

Human resources are significant in any department of life. Luckily, in Pakistan, the Public and Private Hospital Workforce is now up to the requirements, to some extent. The number of General Practitioners, Technicians, Specialists, Midwives, Pharmacists, administrative staff, doctors, and nurses is quite satisfactory. Provinces are devotedly working on it as they are autonomous in healthcare delivery, under regional policies and strategies. Some of these strategies are Hiring, Retaining the staff, i.e., paying them remunerations; long-term mechanisms instead of short-term and medium-term plans, Human Resources (HR) Planning and Policies, Recruitment& Selection. Training exists at all levels. Occupational Health and Safety also exist but with deficient resources like Incinerators, and hospital waste is burned or dispose of with the use of chemicals. The Social life of hospitals is satisfactory. For corporate culture at the doctors' level, PMA is there, and for paramedics, paramedical staff unions also work. The main gaps and challenges in this area are the absence of a robust performance appraisal system, Ill-defined career progression and Sluggish progress of staff, Nonexistent training facilities for hospital staff, and absent culture of merging corporate with social life.

In the case of hospital financing and funding, Public hospitals receive funding from the Government. Whereas, in nonprofit organizations, sources of hospital funding at the national level & International Level include government grants, government funding against approved budgets (as per agreements / MOUs / Contracts). Sources of Revenue for Public Hospitals are from OPD /indoor /test fees/procedures and outdoor charges. Funding is according to per patient/per day for different hospitals. Annual Development Program issues grant to the finance department, and then the development wing sanctions the budget to all hospitals. The hospital building infrastructure plans according to government rules and procedures in which Pakistan works Department (PWD) and other technical partners are usually included, as per requirement. Logistics Management Unit (LMU) in Punjab comprises of "e-Procurement and Inventory Management Unit," which is an integrated system of medicines procurement. BERC (Biomedical and equipment repair center) is responsible for the maintenance and monitoring of equipment in Punjab. The official Financial and Technical bidding process/open bidding is used for the selection of companies. The lean management approach has also been adopted by public sector hospitals either at the National level or Provincial level, to some extent.

In the case of quality and patient safety, there have been made many improvements. The same is in the case of structural arrangements for quality improvement. Provinces do the registration system, licensing, and relicensing mechanisms through proper legislation. There are also complaint systems to oversee the rights of patients. The quality improvement plan is a big progress in all hospitals. Patient organizations are present in the form of the Social Welfare Department and Patient Welfare society etc. In case of any adversity, and immediate reporting system is also working in some hospitals. However, there is no initiative of Patient safety Friendly Hospitals initiatives (PSFHI) on behalf of WHO. National Disaster Management Authority (NDMA) provides a framework/disaster management plan for national-level disaster management, mitigation, and planning. Responsibility for managing the healthcare needs during disasters, falls on departments of health within the provinces. The main gaps and challenges in this area are Lack of emergency medicine and critical care, qualified and trained human resources, and clear guidance for the work of different stakeholders.

SECTION 3: FUTURE OUTLOOK

K. FUTURE OUTLOOK

K-1 Hospital Reforms and Transformations:

Recently, the following hospital reforms were undertaken:

1. *Strengthening of Emergency Medical Services.*
2. *The Provincial Government augmented the Emergency Medical Services under the standards by it.*
3. *Provincial Government developed the project proposal "Strengthening of Emergency Medical Services" and executed it in the hospitals.*
4. *Surgical Complexes are being developed in teaching hospitals.*

The Punjab Healthcare Commission Act is the most significant development to enforce MSDS in the hospitals and accreditation of the same with PHC. It has resulted in the improvement of the quality of care standards of the public sector hospitals. Moreover, PHC has also initiated an exercise for accreditation of Category one hospitals of the private sector in Punjab. The most recent example of sharing quota systems of drugs for the treatment of Covid-19 based on 60:40 ration for public and private hospitals verified by the Healthcare Commission has further strengthened the hospital reform process of Punjab. In case of Benazir Bhutto hospital, rwp, HR shortage and increased Patient load. In Indus, there are so many challenges, instead of reformations and transformations in the hospital sector. In Quetta, there are seen three main reformations in the hospital sector, i.e., Trauma Center at SPH, Isolation Ward, and MERC. In AJK also, new structures have been developed after the earthquake of 2005.

K-2 Current Challenges, Needs

Challenges

- *Up-gradation of various departments e.g. Pediatric surgery, pediatric ICU etc.*
- *Establishment of the planning department.*
- *Monitoring and evaluation team.*
- *Fully functional HRMIS*
- *Expansion is required in hospital infrastructure*

Needs

- *Strong need to increase health budget as per international standards, i.e., at least 5% of GDP*
- *Improvement of Health at scale is to be targeted through Universal Health Coverage via Integrated Health Care*
- *Dedicated work on capacity building at all levels of health care and Accountability of health staff through stringent health legislations*
- *Involvement of Information Technology, so that health for all becomes accessible, and, User-friendly Quality Management System*
- *Monitoring frameworks that include financial monitoring, clinical volumes monitoring, clinical audits, and facility management audits.*

K-2.1 Country's Future Outlook on Hospitals

There is a dire need to develop plans and policies regarding the development of hospital performance and for new hospitals . The policy framework shall envisage the number of Hospitals to be developed in line with the demographic needs of the country. This should take account of the number of hospital beds to be added after every five years, the number of intensive care beds to be allocated in each hospital, strengthening of pre-hospital emergency care and the number of specialty hospitals to be established. Other future outlooks include the promotion of day case surgeries/daycare treatments to economize the treatment and reduce the incidence hospital required actions, introducing electronic medical record-keeping to take evidence-based decision making regarding the management of the hospital and clinical care of the patients, and introduce the concept of preventive maintenance. There aslo need for replenishing / up-gradation of hospitals with the modern day machinery, construction of new blocks, recruitment of new staff, introduction of latest laboratory eg installation of MRI, CT Scan, and digital X-Ray machine in hospitals of AJK.

Conclusion

For future outlook, different reforms and transformations are being done in all hospitals of the country. These reforms exclusively include the Strengthening of Emergency Medical Services and the development of surgical emergencies . Provincial governments are working on it with all possible resources and means. After COVID-19, public and private hospitals verified by the Healthcare Commission have further strengthened the hospital reform process. On the national level also, the policy framework shall envisage the number of Hospitals to be developed in line with the expanding demographic needs of the country. Similarly the number of hospital beds to be added after every five years, the number of intensive care beds to be allocated in each hospital, strengthening of pre-hospital emergency care and the number of specialty hospitals to be established. The essential requirement, in this case, is a urgent need to increase the health budget as per international standards, i.e., at least 5% of GDP allocated for health . Moreover, the utmost challenges in this area exist for establishing the planning and monitoring departments , Establishing of well trained monitoring and evaluation teams, and a fully functional Hospital and Human Resource Information Systems.

Recommendations

- There is need to perform an indepth review of hospitals sector performance, both at National and provincial levels on regular basis, say after two years or so. It would help in assessing the progress of hospitals and development of corresponding improvement plans.
- The coordination status and the relationship between multiple departments contributing to hospital functioning be strengthed. For example strong need to build relationship between the Health Department and the Welfare Departments. This is create a sense of complimentary. This would help marginalized poor people to get adequate hospital services at the time of need. Inter departmental coordination for improving hospital functioning be given utmost importance.
- Government should brain storm and workout what exact reforms are to be in place for shifting roles from Department of Health (DH) to an autonomous Hospital Authority (HA).
- The adequacy of existing legislation for hospital functioning need to be reviewed to underpin both public and private sectors, ensuring that there is cooperation and coordination and common purpose and with the threat of infectious diseases/pandemics
- Need and provision for a well-defined essential package of medical services. Hospital specific key performance indicators be develop and used in monitoring.
- Creation of a well-functioning units of planning, monitoring and evaluation in hospitals. Provision of continuous capacity building of hospital staff in Planning, Financing M&E protocols.
- Planning departments should also be focus of Hospital MIS and be able to analyze data and produce regular analytical reports. Future plans are be based on evidence thus generated in hospitals.
- Integrated people centered health services and primary health care approach needs to be considered in the planning process.
- They should be regular training programs develop and launched for hospital staff on multiple areas and for safety measures.
- Need for staff satisfaction survey be addressed.
- Hospital should perform cost benefit analysis for it services. Accordingly autonomous hospital should work out ways and means to generate revenues from hospital services, mainly to cover some essential costs.
- Hospital information management system be developed and effectively launched as in integral part of management.

- Implementation mechanism for existing minimum service delivery package MSDP indicators be evolved and executed. Similarly there is a need for quality care framework and its transformation into action.
- Roles and responsibilities for disaster management and emergency services need to be developed with an elaborate disaster management program.
- The culture of development and dissemination of annual hospital health report be introduced in public sector hospitals.

ANNEXES

ANNEX. 1

List of Hospitals / Departments Consulted for Data Collection.

Sr. No	Institute	Resource Person
Federal:		
1	Ministry of Health Services Regulation and Coordination	Mr. Altaf Doger, MOH
2	Pakistan Institute of Medical Sciences	Mr. Altaf Doger, MOH
Punjab:		
3	Punjab Strategic Planning Unit, Health Department Punjab Lahore	Dr. Shagufta Zareen Director PSPU, Lahore
4	University of Health Sciences Lahore.	Dr. Asad Zaheed Registrar, UHS Lahore
5	Jinnah Hospital Lahore	Mr Saeed Alvi Director HMIS
6	Mayo Hospital Lahore	Prof. Dr. Asad Aslam Director. Mayo Hospital
7	Sir Ganga Ram Hospital Lahore	Dr Abdul Basit Medical Superintendent
8	Holy Family Hospital Rawalpindi	Professor Dr. M. Umar VC, RMU Rawalpindi Dr. Shahzad Ahmed, Medical Superintendent Dr. Nadeem Malik, Dy. Medical Superintendent
9	Benazir Bhutto Hospital Rawalpindi	Professor Dr. M. Umar VC, RMU Rawalpindi Dr. Rafiq Ahmed, Medical Superintendent Dr. Asif Chowan, AMS
10	Nishtar Hospital Multan	
11	University Hospital Lahore	
KPK:		
12	Ayub Medical Complex Abbottabad	
13	Hayatabad Medical Complex Peshawar	Dr. Mohamad Faisal,
14	Lady Reading Hospital, Peshawar	Dr. Mohamad Faisal,
Balochistan:		
15	Bolan Medical Complex Quetta.	Dr. Tahira Baloch, Director of Public Health, DGHS Quetta
16	District Head Quarter Hospital Sibi	
17	Health Department Balochistan	
Sindh:		
18	Services Hospital Karachi	Dr. Solman Solangi,
19	Layari General Hospital Karachi	Dr. Solman Solangi,
20	Indus Hospital Karachi	Dr. Fahim Ahmed. Director Indus Hospital
AJK:		
21	Abbas Institute of Medical Complex Muzaffarabad	Dr. Kamran Riaz Dar, Joint Executive Director
22	Sheikh Khalifa bin Zayed Al Nahyan Hospital, CMH Muzaffarabad	Dr. Sardar Mohammad Zafar, Deputy Medical Superintendent
23	Health Department AJK	Mr. Khawja Manzoor Ahmed

ANNEX. 2

Important Studies / Documents Hospital Sector / References

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